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SOUTHERN TEXTILE BULLETIN

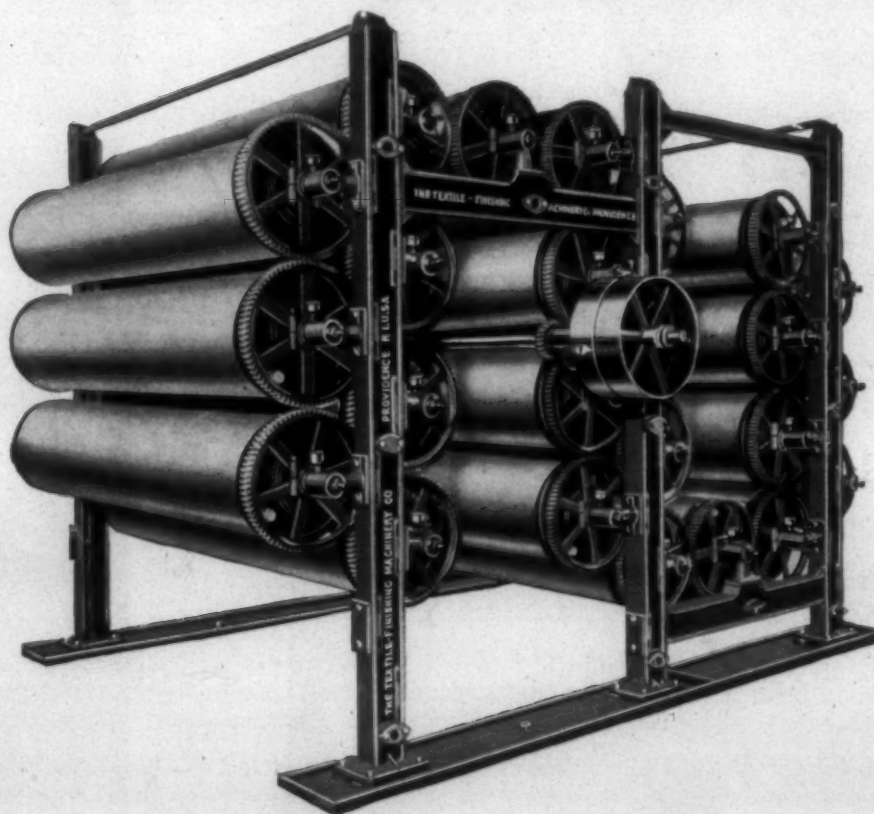
VOL. 34

CHARLOTTE, N. C., THURSDAY, MARCH 1, 1928

NUMBER 1

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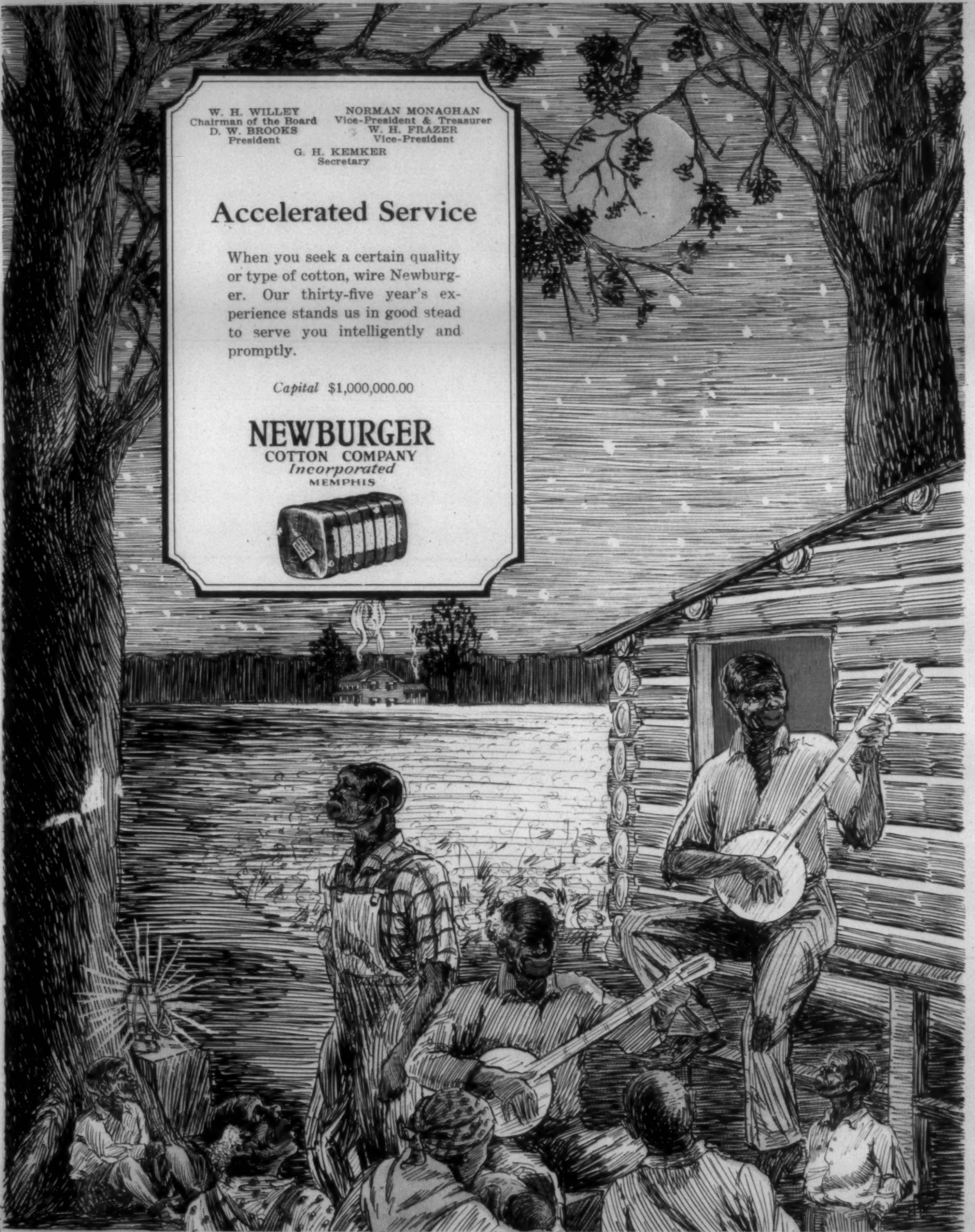
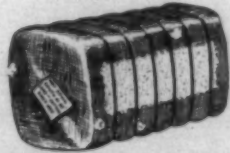
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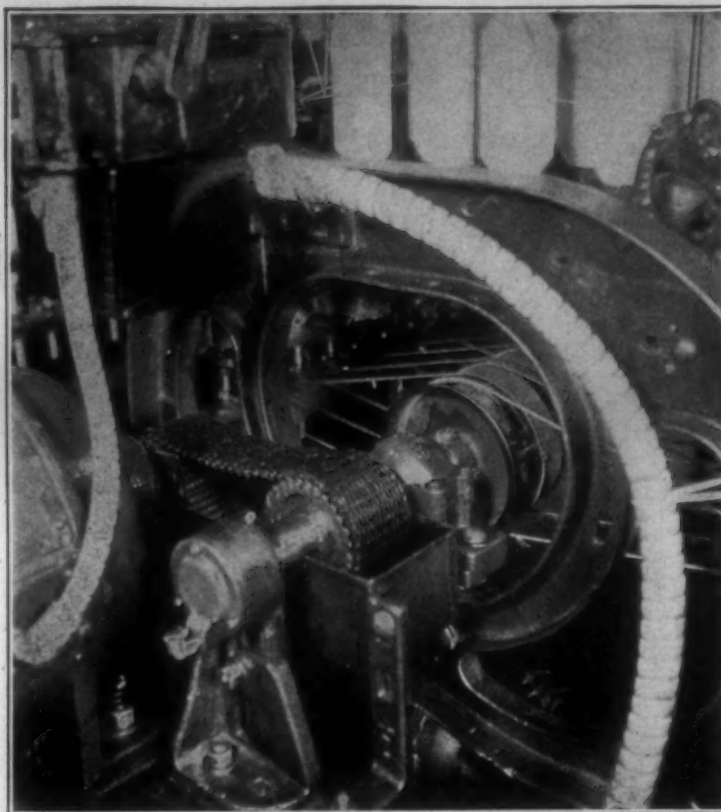
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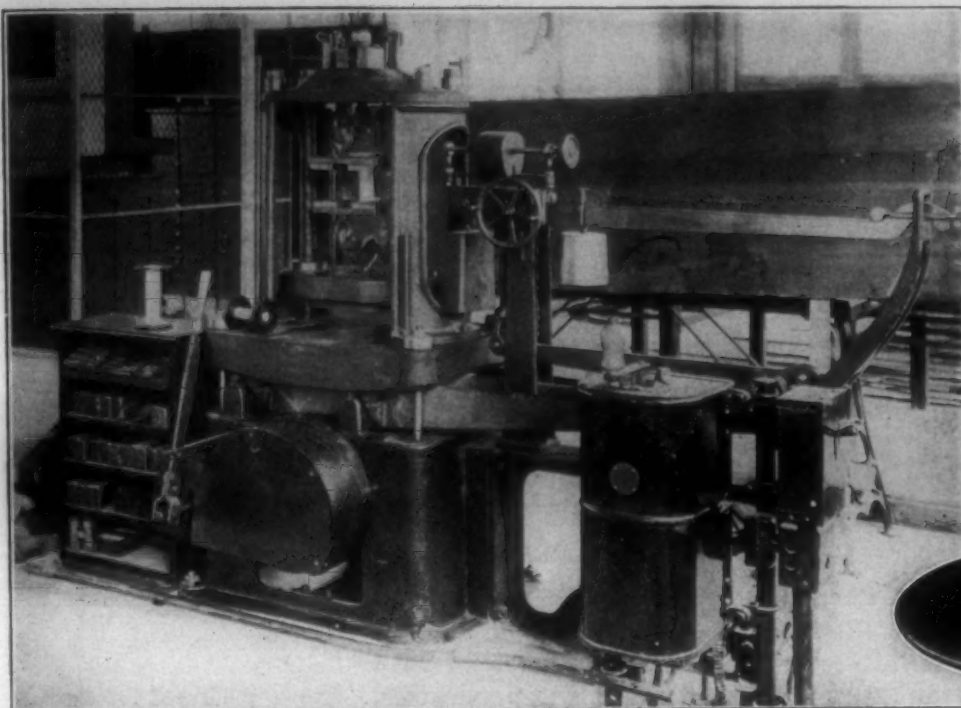
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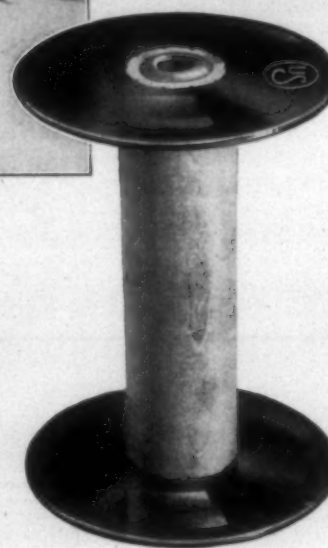
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SOUTHERN TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 18 WEST FOURTH STREET, CHARLOTTE, N. C. SUBSCRIPTION \$2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MARCH 3, 1897

VOL. 34

CHARLOTTE, N. C., THURSDAY, MARCH 1, 1928

NUMBER 1

Weavers' Division Discusses Plain and Fancy Work

The meeting of the Weavers' Division of the Southern Textile Association, held February 22 at Clemson College, S. C., was one of the best meetings any group of the Association has ever held. The attendance was unusually large, in spite of bad weather, and the interest shown throughout both sessions gave ample evidence of the whole-hearted support that the members are giving the work of the organization.

W. A. Black, assistant chairman of the Weavers' Division, presided at the meeting, L. L. Brown, chairman, being unable to attend.

The morning session was devoted to a discussion of plain weaving and the afternoon program featured fancy weaving.

In opening the first session, Mr. Black said:

CHAIRMAN BLACK: We shall now have a few words from the president of Clemson College, Dr. E. L. Sikes, whom it is always a pleasure to hear.

DR. E. L. SIKES: I want to welcome you gentlemen to this place, for we are glad to have you here. I do not see why this should not be the great central meeting ground for you men who are engaged in this business. We want a textile school or textile institute second to none, and I want you men to feel that it is yours, that it is here to help you do the task that you are doing for the world. I have great respect for what you men are doing. You know when the Master was asked whether or not His work was genuine and what were the marks of the man that led the Christian life, He answered somewhat like this: "I was hungry and ye fed me; I was sick and in prison and ye visited me; I was athirst and ye gave me drink; I was naked and ye clothed me." Now, that last is your job, clothing the world; and I think it is a task that God Almighty wants done. And you are clothing the world better than it was ever clothed before. There are more clothes in the world today than ever before. This is the anniversary of George Washington's birthday. Think how few clothes the people of that day had. Many of their clothes were made of leather. Even a hundred years later, how little the people had. And think what the conditions are now and what has made the improvement possible. It was made possible by the use of a machine that strengthens your hands, that strengthens your arms, that enables you, the successors of those men of a few generations ago, to work no harder but turn out a great deal more. So I think it is an opportunity to do, as your share of this world's work, a thing that God wants done; and I think a man who engages in this business is doing the right kind of work.

There is another thing I want you men to be interested in, and that is the training for textile work. You know it is one thing to have general intelligence and it is another thing to have trained intelligence. I have seen men with a great deal of intelligence, who knew this and that and the other, but who were not trained for any one thing. Now, the men who were the founders of this great republic were advocates of general intelligence, but they did not stop there. Nearly every one of the signers of the Declaration of Independence started a great university—Thomas Jefferson the University of Virginia; Benjamin Franklin the University of Pennsylvania. They believed in general intelligence, but they knew also that we must have trained and intelligent leadership. You know, it was believed for a long time that one type of education was as good as another. The Greeks have a great civilization; they produced the greatest intellects I think the world has ever seen. I think old Plato had the strongest mind a man ever had. But what were their minds trained to do? They could take a piece of marble and carve the statue of an angel out of it. But when it came to doing other things, what did they do? They tilled the soil with a crooked stick, as it had been done for generations. They wore the same kind of clothes they had always worn. Take Rome; when it came to making things to improve daily life the Romans were as far behind as naked savages. It is only in the last seventy-five years that we have decided the man who handles the machine or handles the plow needs an education just as much as the man who is going to be a lawyer or a preacher or a doctor. When I went to college (which has been several years ago), all the fellows who went there expected

to be teachers or lawyers or preachers or doctors. If a fellow could not handle the curriculum the authorities told him he could not enter any of the learned professions and to go on back to the farm. But the world has now changed completely; those learned professions are not the only ones. As a matter of fact, you remember that the members of those learned professions used to dress differently from everyone else. When I was a boy on my father's farm and went to town I would slip into the court house, and when I saw the lawyer come in I thought he was the biggest man in the world. Or when I chanced to meet the preacher on the street, or when the doctor came along, wearing a long black coat, and spoke to me, I thought it was a wonderful thing. Yet you know the man who labors is now putting himself on the same level, and the lawyers and preachers and doctors realize it, and they have ceased to dress differently from the rest of us. Now you can not tell a preacher from anyone else; they have quit their foolishness. Why? They realized that they are not different from us; they realize that every man who works is doing something that the world needs to be done. When I see a complicated piece of textile machinery and see a man get down and handle that machinery I feel like taking off my hat to him. Why? Because there is everything in it; there is science in it; there is intelligence; there is training. The learned professions are now not limited to preaching and teaching and law and medicine; there are learned professions in industry. You know Thomas D. Clemson said in 1850 that the only hope of progress was in the application of knowledge to the arts and industry. Since then, in those seventy-five years, the world has gone forward faster than it did in the thousands of years before. Why? Because it makes wealth, and wealth is the only thing that makes life worth living. You know, I think all this talk about the bad influence of material things is all bosh. In one of the last books of the New Testament, John, the Beloved Disciple, says: "I pray above all things, my beloved, that ye will be prosperous." Now there was a man praying that his folks would be prosperous. What has made the world prosperous? I think it is the application of knowledge to the doing of those things that give us more clothes to wear and give us more food to eat. We are further from starvation today than we were a hundred years ago, when the world had fewer people; we have more clothes today than the world had a hundred years ago, when the world had fewer people. Intelligence has done it. Hard work is a good thing, but unless it is directed by intelligence it does not amount to much.

I want to welcome you men and ask for your co-operation in building here a textile school that will serve you and serve this generation in this new day.

CHAIRMAN BLACK: We thank you, Dr. Sikes. You have a wonderful institution here; we have seen some of it this morning and hope to see more of it this afternoon.

Mr. Brown was called away after coming here this morning, so it falls to me, as his assistant, to fill the chair. I shall ask that you enter wholeheartedly into this discussion, so that we shall all get some benefit from it. We shall have the plain weavers' discussion first and jump from that into the fancy weavers' discussion.

Setting Loom on Two-Shade Work

The first question is: "What is the best method of setting up a loom on two-shade work? Would you pick over the yarn in the front or back harness from the right hand box, and why?"

We got twelve replies, ten of which said pick over the back harness; two of them the front harness. It seems that ten out of twelve would mean that the best practice is to pick over the yarn in the back harness. I should like to hear from some of you gentlemen on that. Some say the advantages in picking over the back harness are better fabric, better texture; others say picking over the front harness does the same thing. We should like to hear from one or both of the two or any others that advocate picking over

(Continued on Page 10)

American Cotton Consumption By Grades and Staples

Introduction

SPINNERS pay for cotton on the basis of its spinning utility. The higher the grade, the longer, stronger, and more uniform the length, and the better its other elements of character; the more spinners will pay, as a rule, per pound for lint. If the growers were paid for their cotton in the local markets as spinners pay for it in the spinners' markets, the growers would secure the greatest returns for their crops by planting that variety which, in terms of yield and spinning utility of lint, creates the greatest values.

Antiquated Local Markets Penalize Quality Production.

The fact that antiquated local markets penalize quality production, is obscured from the growers by an inequitable custom of buying in the local markets on the basis of the average grade and staple value of the cotton that is marketed on a particular day. Because of this custom, the producer of low-quality cotton ordinarily receives as much per pound as his neighbor who produces cotton that is high in spinning quality. The grower of low quality cotton is more than pleased with this result because, as a rule, the varieties which produce the shorter lengths tend to out-yield those which produce the longer, better staples.

Quality Pays the Community

Even with the somewhat lower yield, however, the total value of lint produced in a community increases up to a certain point, as determined by variety tests.

There is little question that the farmers of most communities that produce $\frac{3}{8}$ -inch to 15-16-inch lint could produce greater total spinning values if they grew varieties that produce lint averaging, let us say, 1 inch in length. Looked at from a community viewpoint, therefore, even in a market where the prices are averaged, it is obvious that total returns to the community will be high. The community as a whole will have more money with which to pay debts and provide living expenses than it would have if the average quality of the lint were low.

Estimates of Mill Consumption, by Grades and Staple Lengths.

The spinners' evaluation of the different qualities of lint is reflected in the quotations for the different grades and staples in the spinners' and central markets. They do not give an adequate idea, however, of the real strength of the demand for the different grades and staples. This can be determined only by taking an inventory, or by making an estimate, of the consumption of the several grades and staple lengths by American mills. Such an estimate will be dependable if the sample data gathered are fairly representative. With a view to making such an estimate of the consumption by American mills, type samples were gathered from 11.8 million active consuming spindles of the approximately 34.4 million such spindles in the United States reported by the Bureau of the Census for the year ending July 31, 1927.

Extracts from Report by B. Youngblood, Senior Agricultural Economist, H. B. Killough, Consulting Specialist, and Peter M. Strang, Cotton Technologist, Division of Cotton Marketing, U. S. Department of Agriculture.

To obviate any errors which might arise from various methods of buying cotton at the mills, it was considered necessary to take actual samples of the types consumed and to class them in accordance with the Government standards. The samples were classed by two expert cotton classers regularly employed by the United States Department of Agriculture in the classification of cotton under the United States Cotton Standards Act and the United States Cotton Futures Act.

There is a general tendency for the mills of a given section to manufacture a certain class of goods. Fall River, Mass., for example, has long been known as a print cloth center; Gastonia, N. C., as a fine yarn center; and Georgia and Alabama, as coarse goods States. Since the mills from which the samples were taken were carefully chosen with respect to this factor, practically all classes of goods manufactured from cotton are fairly well represented in the survey.

The demand of the mills studied for cottons of different staple lengths, is set forth more concisely in Table 3.

Table 3.—Staple length of cotton spun by 11.8 million active consuming spindles, by percentages:

Staple Length	% of Total
Below $\frac{3}{8}$ inch	0.08
$\frac{3}{8}$ inch	19.25
15-16 inch	34.53
1 inch and 1 1-32 inches	34.46
1 1-16 inches and 1 3-32 inches	5.99
1 1-8 inches and 1 5-32 inches	3.07
1 3-16 inches and 1 7-32 inches	2.23
1 1-4 inches and over	.39
Total	100.00

Cottons Most Demanded.

Of all lengths consumed in the mills studied, the strongest demand is for cotton 15-16 of an inch in length; the next strongest is for cotton 1 inch to 1 1-32 inches in length; the third position is held by cotton $\frac{3}{8}$ of an inch in length. Below $\frac{3}{8}$ of an inch, consumption falls off rapidly, amounting to less than one per cent of the total consumption. The total consumption likewise falls off on the longer lengths. The consumption of cotton 1 1-16 inches to 1 3-32 inches in length amounted to 5.99 per cent of the total; of 1 1-8 inches to 1 5-32 inches, 3.07 per cent; of 1 3-16 inches to 1 7-32 inches, 2.23 per cent; and of 1 1-4 inches and over, only 0.39 per cent.

These figures indicate that the best interests of the growers of American upland short staple cotton would probably be served if they would select varieties that produce cotton about 1 inch in length. Such a cotton in unfavorable years might produce lint only 15-16 of an inch in length, but in more favorable years the lint might be from 1 inch to 1 1-16 inches in length.

Mills Restricted as to Staple Length.

The cotton consumed by a given mill does not vary much in length of staple. It may or may not vary in grade. There is considerable evidence that mills producing trademarked goods, wherein uniformity of product is of utmost importance, are definitely restricted as to both grade and staple of cotton used. Mills that regularly produce certain classes of non-trademarked goods, but for which specifications as to strength and finish are rather rigid, require cotton quite uniform in staple length. A mill is designed usually to handle a certain range of yarn numbers, and this fact also precludes much variation in the length of staple of the cotton used. The manager whose mill is running smoothly on a certain type of cotton is disinclined to change to another type.

Apparently only a small percentage of the mills of the United States could use 13-16-inch cotton regularly with their present equipment. It is estimated by men who are familiar with spinning machinery that fully 85 per cent of American mills, as now equipped, could not use this cotton. The opinion in the trade is that the greater part of the short cotton goes abroad. Indications are, therefore, that too much short cotton is grown in the United States, and this is the opinion of well-known cotton breeders and others. D. R. Coker, of Hartsville, S. C., in a letter of November 20, 1926, makes the following statement concerning the 1926 crop:

"There is a heavy over-production of the shorter lengths and lower grades, which is damaging those of us who produce good length, high grade cotton."

The head of a successful group of Southern mills, who purchases over 100,000 bales of cotton each year, wrote in July, 1927:

"Answering your question . . . will say that in a general way we have had no difficulty in obtaining during the past twelve months any kind of cotton we wanted. However, it would hardly be fair to make this statement without supplementing it by saying that on certain of the better staples and qualities of upland cotton—that is to say in middling and above in grade, and in staple above flat inch, and from that to 1 1-16 inches—the supply out of the last crop was not plentiful. In other words, I do not believe the country produced as much cotton of that description as would tend to make the supply comfortable. As a result, such cotton commanded quite a high premium. I think this is partly due to the fact that more manufacturers are using cotton of that description, which in turn means that the converters and users of cotton fabrics are paying more attention to the quality of the goods they use, are setting up more rigid specifications than heretofore, and to meet these requirements and

specifications it is necessary that better cotton be used and that manufacturers be more discriminating in their purchases."

There seems to be small justification, therefore, for the production of cotton that is less than $\frac{3}{8}$ of an inch in length, in the cotton belt of the United States, where practically all soils that are well suited to cotton culture are capable of producing cotton $\frac{3}{8}$ of an inch or better in length.

These short cottons, being low in spinning utility, bring a low price. They are not used in this country to any extent and, going abroad, they compete with the short cottons of the Orient and for this additional reason bring the American farmer a very low return.

Table 4.—Grades of cotton spun by 11.8 million active consuming spindles of the United States, by percentages. (Estimate based upon classification of type samples):

Grade	% of all grades
Strict good middling	1.67
Good middling	16.18
Strict middling	25.33
Middling	21.82
Strict low middling	21.72
Low middling	7.39
Strict good ordinary	4.50
Good ordinary	1.00
Below good ordinary	.39
Total	100.00

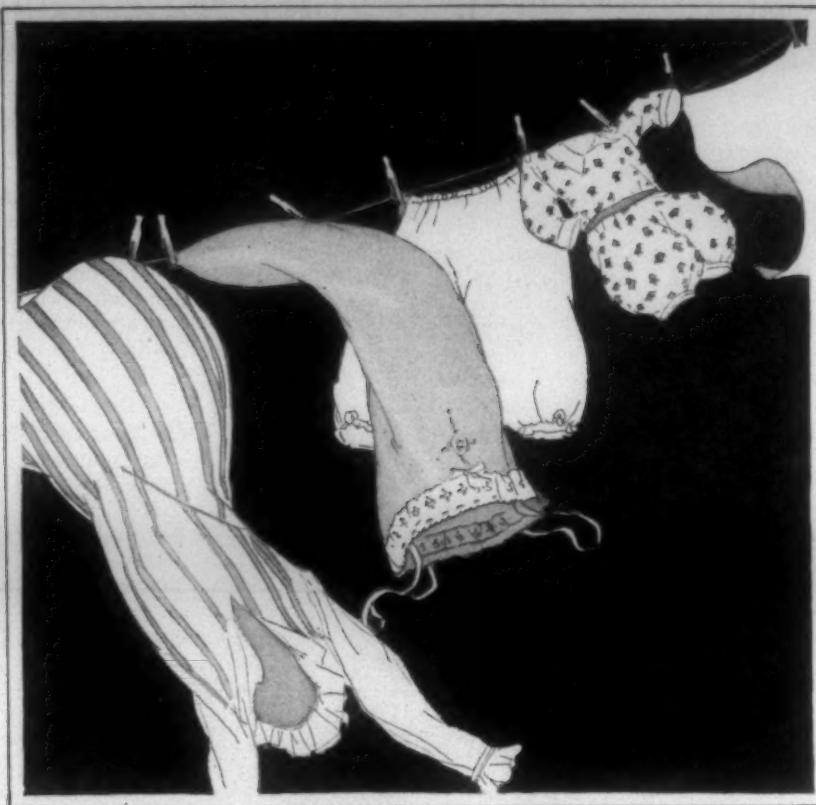
Mills Have Some Latitude as to Grades.

Although mills are rather restricted as to the length of cotton fiber to be spun, there is some latitude as to grade. Some mills may use a higher grade if they can buy it at or near the price of their customary grade. The installation of the most improved cleaning equipment has enabled some mills in recent years to spin cotton that is about one grade lower than the cotton they have formerly used. This is an advantage to them in years like 1926, when high grades were relatively scarce and when low grades were very abundant and sold at considerable differences in price. Contrary to popular belief, a mill does not drop two or three grades below the grade which it ordinarily spins. Obviously it must stick pretty closely to its particular staple length, strength, uniformity, and character of lint, if it is to turn out a uniform product. No spinner would be unwilling to go back to his former higher grade of cotton, however, if the premium on it were not too great.

Length Fixed By Variety, Soils, and Seasonal Conditions; Grade Largely a Matter of Harvesting, Weather, and Ginning.

The length of cotton is essentially a matter of breeding, soils, and culture, but its grade is largely a matter of weather, time and method of harvesting, and method of ginning. To be sure, there are mongrel cottons so low in uniformity and other elements of character as to affect the grade materially. The best interests of the growers would undoubtedly be served if they would

(Continued on Page 12)



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Weavers' Division Discusses Plain and Fancy Work

(Continued from Page 7)

the yarn in the front harness. It seems that the majority believe it is better to pick over the yarn in the back harness.

CARL R. HARRIS, Assistant Superintendent, Inman Mills, Inman, S. C.: We are picking over the back harness and are doing it for the reason that we think we make a better selvage and not a better piece of goods other than the selvage. I am frank to say that is one of the things we have not gone into very thoroughly, but we do feel we make a better selvage by picking over the back harness.

M. O. ALEXANDER, Superintendent, Woodside Cotton Mills, Greenville, S. C.: We are picking over from the right, because it holds the filling and prevents what we call the reedy appearance of goods—picking over the back harness from the right-hand end and picking over the front harness from the left-hand end. Coming that way, coming first from the left-hand end from the front of the harness, it strikes the dye cord first and holds each thread so it stands an even distance apart. We ship goods to foreign countries and have practically no kick on reedy goods. On the tape selvage we pick over the outside thread. The shuttle goes this way and strikes the outside thread, strikes the dye thread. That is our contention, that picking over the back harness from the right-hand end or picking over the front harness from the left-hand end holds the thread and keeps the warp space exactly even and gives a better spaced piece of goods.

CHAIRMAN BLACK: That is all tape selvage?

MR. ALEXANDER: That is all of it.

CHAIRMAN BLACK: Do you agree with Mr. Alexander as to plain weave where you do not use tape selvage?

MR. ALEXANDER: I might say all our goods are set the same way, plain weave or not.

Picking Over Back Harness

S. H. BELL: I experimented a whole lot with that, picking over the right and over the left and over the back and over the front. I have not been able, to be frank about it, to tell you exactly why is what, why we do this or that or the other, any more than I could find it was the custom; in other words, to be standardized, to standardize our work so every man would have the loom in a certain position to get to the cams on his harness. I have turned the looms, picking from the back on the right-hand end. That is our custom, to pick from the back. I have always thought, and my experience could not add anything more than to say it is the custom; that is all I have ever found to it. I can change the selvage from one side, as Mr. Alexander said, and it would go to the other side, and vice versa. I can't see anything more to it than custom about putting the shuttle in the right-hand end.

MR. WILLIAMS: I like to pick from the right-hand end over the back harness, especially on Draper looms, because the forward end of the shuttle has the most weight, and if the harness is divided you have to have the back shade a little higher than the front. By doing that you hold the shuttle down. If you run the shuttle over the high harness or back harness you have some trouble in holding the shed. So far as the cover on the cloth is concerned, I don't think it would make any difference; but to have the hopping end of the shuttle picking over the high harness, over the high shade, is the reason I have them that way.

Life of Shuttles

Suppose we now take up Question No. 2: "What do you consider a fair number of shuttles per 100 automatic looms on sheetings and drills per year, the loom making around 160 R. P. M.?"

We have received eleven answers. Five answers say 100 shuttles per 100 looms per year, or one shuttle per loom. Two answers say 150 shuttles, or 1.5 per loom per year; one answer 125, or 1.25 per loom per year; one answer is 165; another answer is 110; that is 1.1 shuttle per loom per year. One failed to answer the question.

Of course, the kind of fabric that is being woven, the speed of the loom, etc., all enter into the life of the shuttle. It seems, though, that the majority think that about one shuttle per loom per year is about what we should use. I should like to hear from anyone who will express himself on this. Mr. Shippey, of the Spartan Mills, is said to have a very fine record on shuttles. Let's hear from you, Mr. Shippey. (Mr. Shippey not present.) I'd like to hear also from Mr. League, of the Poe Mill. (Mr. League not present.)

A MEMBER: Let's hear from Mr. Mitchell, of the Belton Mills.

Shuttles Run Fifteen Months

J. B. MITCHELL, Overseer Weaving, Belton Mills, Belton, S. C.: I have been keeping on file a record on shuttles for the last seven years. Each loom (the number of that loom) and each shuttle is put down in what we call the shuttle book. When we began keeping the record we found the life of a shuttle was about ten months; since keeping the record, last year the average life of a shuttle was fifteen months. In other words, the average shuttle ran fifteen months. It will be surprising to those of you who have not been doing it if you keep a record, for you will find it is a very small

number of looms that are using all the shuttles. We think it is a very profitable thing to keep this record.

MR. WOFFORD: I should like to know how many men present keep a record of the shuttles used in their looms.

CHAIRMAN BLACK: Please raise your hands. (Seventeen.) It seems seventeen keep such a record. Let's hear now from T. C. Drew.

T. C. DREW, JR., Night Superintendent, Converse; Clifton Manufacturing Company, Converse, S. C.: We have been keeping a shuttle book in the Converse Mill. Running day and night, we find that it averages about 1.5 shuttle per loom per year. Before we started keeping this book our shuttles were usually quite high, and we have cut it down quite a bit. We also use tallow on our shuttles every other week and find that has lengthened the life of our shuttles. Our average is about 1.5 shuttles per loom per year, running day and night.

Treat Shuttles With Tallow

CHAIRMAN BLACK: You notice Mr. Drew says he uses tallow. It is an evident fact that by the treatment of a shuttle you can prolong its life. I wonder how many of us ever look at a shuttle after it has been placed in the box?

MR. DREW: We have reduced our shuttles ten per cent by using tallow.

C. H. LOCKMAN, Superintendent, Henrietta Mills, Caroleen, N. C.: Do you use a dogwood or persimmon shuttle?

CHAIRMAN BLACK: I'd like to hear from W. P. Leister, of Walhalla.

W. P. LEISTER, Superintendent, Walhalla Plant, Walhalla, S. C.: We keep a record, the same as the gentleman from Belton, of each individual loom and found about the same thing he said he found, when we began to keep the record. We have reduced our consumption of shuttles considerably. At the present time our shuttles go from about fourteen to sixteen months. I think that is about the record. We used 746 shuttles in the last twelve months on 900 looms. We also use tallow. Mr. Morse is here, the overseer of our weavers; perhaps he can give you more information than I can.

S. W. MORSE, Weaver, Walhalla Plant, Walhalla, S. C.: We use tallow, and we also have the second hand inspect that loom. We don't leave it up to the loom fixers but have the second hand inspect it. If he finds anything wrong he reports it to me.

CHAIRMAN BLACK: How do you use tallow, hot or cold?

MR. MORSE: We use it cold and use the very hardest sperm tallow we can find. We rub it on both sides of the shuttles, and it preserves the shuttle and rod. Another thing; a lot of fixers leave rods so they shake. The thing to do is to keep them tight, keep them in place. If you keep that tallow on there it helps.

CHAIRMAN BLACK: Let's hear from Marshall Stone.

MARSHALL STONE: I can give very little information, as we have only a few looms on sheeting. I think the life of a shuttle is about nine months. We keep an individual shuttle record at both mills, of when the shuttle is put in the loom. We also use tallow.

C. H. LOCKMAN, Superintendent, Henrietta Mills, Caroleen, N. C.: I should like to ask about what percentage of the shuttles wear out and how much changing is going on when the looms use few shuttles.

CHAIRMAN BLACK: You have asked a big question. Can any of you gentlemen do him any good?

MR. BISHOP, of Converse: I want to mention a little thing about fixing those shuttles. We fix them every other Saturday from twelve to one. We grease the shuttles and fix them. We have ten per cent bursted; the broken shuttles are not over ten per cent. Ours wear out and splinter up. We had lots of broken ones at first, but nothing like them that wear out. When we put on tallow we don't pull it all over but just on the sides.

CHAIRMAN BLACK: Do you use dogwood or persimmon shuttles? Someone asked, a while back.

MR. BISHOP: We use dogwood.

MR. WILLIAMSON: Do you have any trouble with the shuttle rebounding after putting the tallow on? Have you any trouble with adjustment?

MR. BISHOP: We tried that, putting it on the front and back, and that is why we stopped putting it all over the shuttle. We had an awful time getting started Monday morning, so now we just put it on the end and let it work out.

CARL R. HARRIS, Assistant Superintendent, Inman Mills, Inman, S. C.: We wrap our tallow and put it on during the week, when we are running, and find we have no trouble with bouncing shuttles. If we put it on on Saturday we might.

Tallow and Japanese Wax

MR. BOBO, Anderson Cotton Mills, Anderson, S. C.: I used the tallow, and I found by mixing the tallow with Japanese wax, about half and half, it helps a lot. It also helps to keep from rebounding. We put it on the hole where the screw goes in. We do it once a week, and we have no trouble with rebounding.

CHAIRMAN BLACK: Mr. Bobo says he mixes the tallow with Japanese wax. If you will allow me, I might say we did the same thing at our place (Continued on Page 14)

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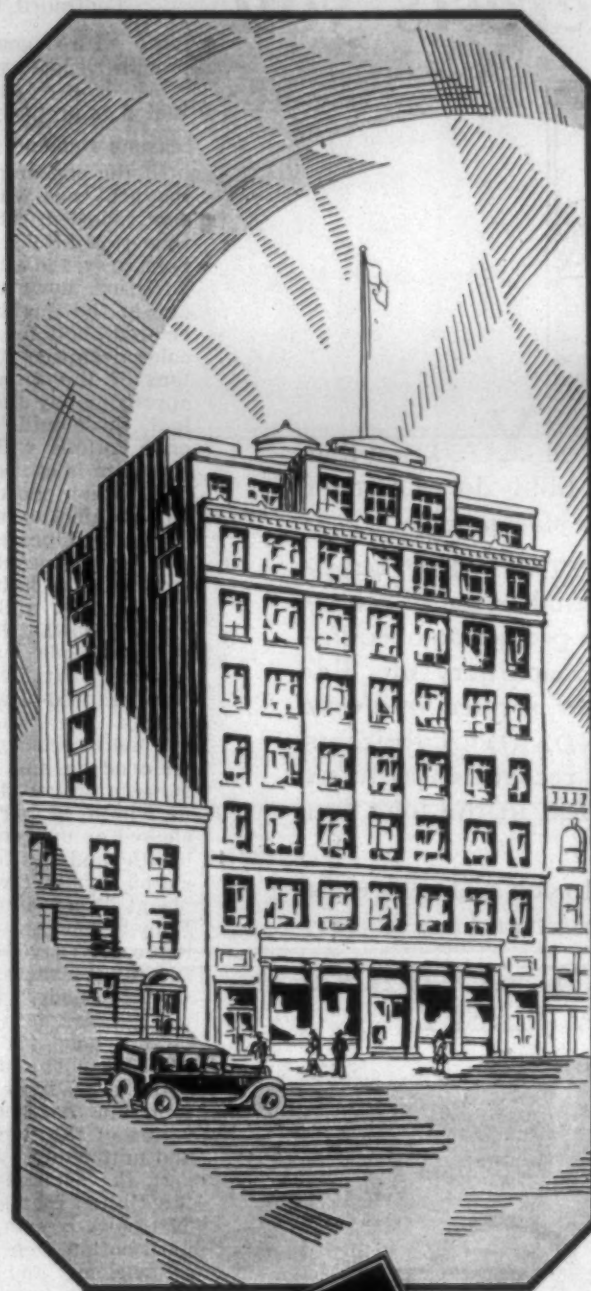
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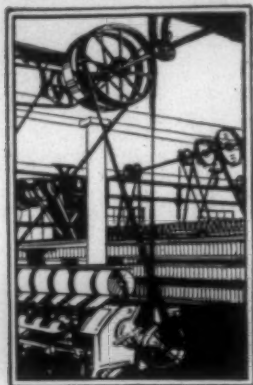
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"STANDARD" Lubricants

Domestic Mill Consumption of American Cotton By Grades and Staples

(Continued from Page 8)

begin with a good variety, harvest it with as little weather damage or other damage as possible, and see that it is properly ginned.

Strong Demand for White Cotton.

Of the consumption reported, 91.5 per cent was white cotton; 5.7 per cent, spotted; 1.8 per cent yellow tinged; and the remaining 1 per cent blue, gray and yellow stained. Some variation, however, is likely to occur in the quantities of white and colored cottons used. Since the colored cottons and the white cottons of the same grade will have approximately the same trash content, those mills that can use colored cottons will do so whenever the price is attractive to them. The mills which can use colored cottons do not object so much to the yellows as to the blues and grays, because the former bleach more satisfactorily than the latter.

Ordinarily, mills want even-running cotton that is uniform in grade and in staple length and of good spinning character. They wish also to be assured of a reliable source of supply. More than 91 per cent of the cotton consumed by the mills included in this study was even-running cotton classed as "regular" in length; 8 per cent was cotton classed as uneven, or "irregular" in length; and less than 1 per cent was cotton termed "wasty," by which is meant "very irregular" in length. Fully 91 per cent of the cotton studied could have been tendered on futures contracts.

As to "body," the cotton studied was classed into three groups, as follows: hard, 14.6 per cent; medium, 83.3 per cent; and soft, 2.1 per cent. Ordinarily, hard cotton brings a premium over medium and soft cotton of the same length, strength, and uniformity. As the figures suggest, the demand for soft cotton in the United States is rather limited. The objective should be medium to hard cotton, depending upon varietal tendency and local farm conditions.

Although there is a strong preference among merchants and some spinners for cottons grown in certain sections of the cotton belt, the results of this study do not indicate that the cotton of a given trade, staple, and character, actually spun by Southern mills was grown in any particular cotton-growing district. Such cotton, in fact, came from all parts of the cotton belt. It appears, therefore, that there is much yet to be learned about "character" in lint. Technological studies are in progress in the Division of Cotton Marketing, Bureau of Agricultural Economics, the objective of which is to identify, measure, and evaluate the several important elements of character in cotton.

Georgia Production and Consumption Compared.

Georgia is the only State for which both production and consumption data on grades and staples were available. It was possible, therefore, to compare grades and

staples produced and those consumed only in that State.

Georgia manufacturers report that a large percentage of cotton used in the State is not grown there. Yet Georgia ranks high among the States of the cotton belt in efforts to co-ordinate the interests of farmers and spinners. The spinners are active in this work because they think that the cotton they need could be produced in their section and that this would save freight and add to the wealth of the community.

The annual production of cotton in Georgia is about the same as its annual consumption. On November 9, 1927, the Crop Reporting Board of the United States Department of Agriculture estimated that the cotton crop of Georgia for the year 1927-28 would amount to about 1,110,000 bales; actual consumption as reported by the Bureau of the Census for the year ending July 31, 1927, was 1,152,855 bales.

The Position of American Cotton in World Demand.

The United States produces more than half the world's supply of cotton. We consume between one-fourth and one-third of this supply. Normally, American mills consume something less than one-half of the American crop.

Since India and China are, next to the United States, the largest producers of cotton, and since the cotton of these countries is practically all short cotton, the chief competition of American cotton growers is in the production of cotton $\frac{3}{4}$ of an inch and less in length. There is very little competition with American production in lengths from $\frac{3}{4}$ of an inch to $1\frac{1}{4}$ inches.

American long staples, $1\frac{1}{4}$ inches and more, compete with Egyptian and other foreign-grown long staples. The United States imports, for example, about 250,000 bales of Egyptian cotton. Outside certain districts which are especially adapted to the production of longer staples, therefore, it would be safe for the farmers who grow upland short staple cotton to plant those varieties which will yield lints measuring from $1\frac{1}{4}$ to $1\frac{1}{2}$ inches.

Demand for Better Staples.

A belief exists in some minds that the introduction of improved processes of manufacture has brought a decline in the demand for the better grades and staple lengths of cotton. Manufacturers of automobile tires are cited, for example, as using lower grades and shorter staple lengths than formerly. This change in the length of cotton used in tire manufacture is due to a better knowledge of the requirements of fabrics for tires. The wearing quality of tire fabrics is said to depend as much upon the flexure of the fabric as upon its strength. Notwithstanding the reduction in the length actually used, the manufacturers still use cottons that average well above an inch in length.

In the absence of specific data concerning the longer staples produced and consumed, it is not possible just now to draw definite conclusions as to how near the American supply of long staple comes to meeting the requirements of American mills.

(Continued on Page 32)



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Weavers' Division Discusses Plain and Fancy Work

(Continued from Page 10)

and found it was better in that it did not require so many adjustments afterwards.

LOUIS E. WOFFORD, Night Superintendent, Inman Mills, Inman, S. C.: I should like to ask Mr. Bishop a question. He said he has ten per cent bursted shuttles. Is that very good or bad? What percentage ought to be bursted and what percentage wear out? It seems that is good, with most of us over here.

CHAIRMAN BLACK: Mr. Phillips, can you turn some light on the percentage of shuttles that should burst in the looms?

W. L. PHILLIPS, Superintendent, Social Circle Cotton Mills, Social Circle, Ga.: I am sorry I can not. My weaver is here, and I ride him so much about bursted shuttles that I am ashamed to say anything.

C. P. DILL, Overseer Weaving, Brandon Mills, Greenville, S. C.: We keep a shuttle record at our place and use tallow. Our shuttle record is about 100 to 100 looms per year. Like Mr. Mitchell, I was surprised to find out how few of the looms were using all the shuttles. You hear loom fixers say that certain looms tear up shuttles. I do think, gentlemen, that ten per cent breakage and ninety per cent wear-out, when the ordinary filling changes every five minutes, is a mighty, mighty good record. It is better than mine, I can tell you. We don't have so many shuttles that actually wear out. I have shuttles on ordinary day run that run three or four years at a time. The big majority of our shuttles, I believe, are discarded from breaks from some cause or from accident. That is why we started keeping the record.

Shuttles Burst in Looms

MR. BISHOP: I did not mean to say ten per cent breakage of shuttles. I meant bursted shuttles, that have been on a month perhaps and burst. Of course, there are more that break than wear out; I admit that. What I meant was good shuttles put in the looms that run a week or two and burst. We run our looms day and night and have a standing contract for 135 shuttles a month, 100 for Draper looms and 35 for Hopedale. We have 1,000 looms running day and night.

C. B. SHIPPEY, Overseer Weaving, Enoree Mills, Enoree, S. C.: I believe a good weaver will help you more than anything else. We run a shuttle to a loom each twenty-four months.

CHAIRMAN BLACK: There is one thing we have to take into consideration,

and that is the man weaving 64 squares certainly will not have as many shuttles bursted or destroyed by accident as a man who is running 100x64 broadcloth or 80 squares. I think that ten per cent of bursted shuttles is a fine record, and yet I believe that is possible on ordinary print cloth.

Transferer Forks Wears Bobbins

The next question (No. 3) is, "Are you troubled with the transferer fork wearing a groove on the end of your filling bobbins and if so what is the remedy?" Only four answered yes, while twelve said no, out of sixteen answers received. Some of you know we have a good many quills or filling bobbins that wear right at the end and thereby become useless or worthless, because the yarn will not pull over that rough place. Then, too, some of them seem to be rough. Are you troubled with that? In this day and time, at the high price of filling bobbins, and using enameled bobbins, it makes it rather expensive to have them worn off at the end. I should like to hear from you gentlemen as to whether or not you are having any trouble of that kind and what you are doing to overcome it. Is anyone having that trouble?

A MEMBER: We are having that trouble and have not been able to do a great deal to overcome it. I notice on the new transferer fork (we are doing over eighty looms) the shape of the fork has been changed.

MR. MORSE: We have had some little trouble with forks wearing out quills and do all we can to eliminate it. We are buying some new forks and replacing ours with new and find them very satisfactory. Our quills are old; they have been used several years.

CHAIRMAN BLACK: Are they enameled?

MR. MORSE: No; plain.

New Fork Overcomes Trouble

B. W. RAMEY, Overseer Weaving, Woodside Cotton Mills, Greenville, S. C.: We find that the new improved fork that Draper is sending out now is practically overcoming this trouble. Take 45 filling made out of short cotton, if the quill is not smooth at the end you will have more double chains. The new fork is a great improvement.

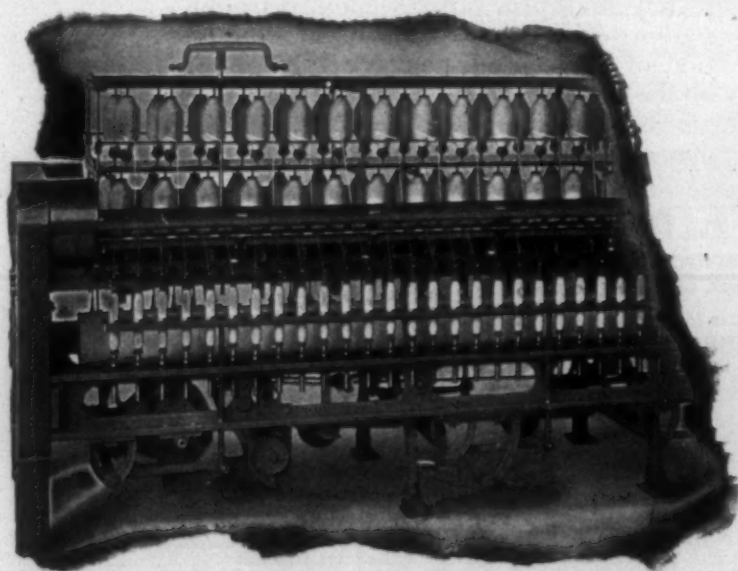
W. W. COBB, Superintendent, Norris Cotton Mill, Catechee, S. C.: We have a little trouble with this fork business. We can eliminate it, I believe, but not all at once. I find that bobbins not treated in oil (just buying bobbins straight, not treated in oil) are far more destructive and have a good deal worse effect. If you buy a bobbin treated in bobbin oil or linseed oil or something like that (that is the plain bobbin, not enameled), it will be

(Continued on Page 16)

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ough penetration of the fibres by the dyestuff, yielding exceptionally even, durable shades. The yarns are delivered in the convenient Franklin Package form that delivers freely either rotating or over end. Skeins and chain warps are eliminated and substantial savings effected in winding costs.

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We may be able to co-operate with you just as successfully, and we will be glad to study your color problem and give you our honest opinion as to the possibilities of increasing your sales. Simply let us know when our representative may call.

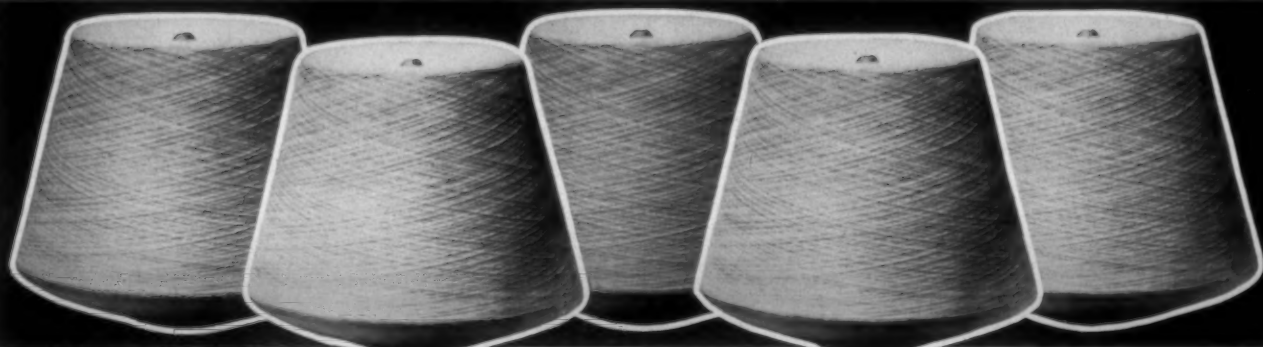
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It is the practice of many knitters who do not spin their own yarn to buy such yarns in the open market. This procedure opens up the possibility of the knitter finding himself with a supply of yarn from several mills, not only wound under varying humidifying conditions, but also with packages of several tapers and densities.

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Effect of Humidification On Health

A REPORT on the subject of artificial humidification in the cotton weaving industry, drawn up by a small joint committee composed of representatives of the Statistical Committee of the Medical Research Council and of the Departmental Committee on Humidity, declare that after the closest investigation no significant difference has been disclosed between the sickness rate of weavers in humid and dry sheds, whether these are distinguished merely as humid and dry, or are classified on the basis of their actual temperatures and humidities.

The first official mention of artificial humidification is to be found in a report made by Dr. Buchanan in 1872, following on a protest made in 1871 by Todmodern weavers against heavy sizing. A protest was made in 1882 by the Parliamentary Committee of the Trades Union Congress, as the result of an official enquiry recommendations were made for ensuring a sufficient standard of ventilation. These recommendations were followed by the Cotton Cloth Factories Act of 1889. Still dissatisfied, the weavers' associations in 1896 renewed their demands for abolition of humidification, and in 1906 a ballot of the weavers showed a large majority in favor of abolition. Ultimately the Factory and Workshop (Cotton Cloth Factories) Act, 1911, was passed, but the operatives have never ceased to agitate for abolition of humidification. Various conferences failed to come to an agreement principally because no definite evidence was forthcoming to show how far humidification within the limits allowed was, in fact, injurious to health, or whether there was more sickness among weavers in humid sheds than among those in which the practice was not adopted.

The Investigation.

Facilities for investigation were obtained in 127 sheds, situated in Blackburn, Nelson, Accrington, weavers, of whom 4,971 were males Burnley and Preston, covering 20,133 and 15,162 females, and investigation proceeded on the following lines:

(1) For each weaver in employment on 1st August, 1925, certain particulars as to name, age and approved society were filled in by each employer concerned.

(2) In order to allow for unequal "exposure to risk" on the part of weavers ceasing work during the year under inquiry, the employers concerned furnished quarterly lists of "exits," concerned, the cypher number of his approved society, and the date of exit.

(3) At the end of twelve months, the cards were submitted to the appropriate approved societies, who supplied, in respect of each weaver, details of the sickness experienced during the year ended 31st July, 1926.

In Preston, Burnley and Accrington, sheds of both types, humid and non-humid, are to be found, whereas in Nelson there are only non-humid sheds, and in Blackburn only humid sheds.

The summary and conclusions of

the committee are partly as follow:

A year's investigation of the sickness incidence found in all the humid sheds, and that found in all the non-humid sheds, reveals no significant difference between the two, either in number of days of sickness experienced, in number of claims made, or in number of persons suffering from one or more sickness during the year of investigation. The only difference is a slight excess of sickness in the nonhumid sheds, and the number of days of sickness lost per claimant is longer in the non-humid sheds than in the humid.

This slight excess of sickness in the non-humid sheds is, however, very long claims in this group, and due to the presence of a few more as these very long claims form only a small percentage of the total claims no material meaning can be attached to the slight differences thus found.

An analysis of the sickness, town by town, produces a similar result, i. e., the humid sheds are not found to possess a higher sickness incidence than the non-humid sheds.

Sickness Claims.

It is argued that in times of unemployment sickness claims tend to increase. During the year of enquiry the non-humid mills investigated were closed on an average for a longer period of time than were the humid mills. Lest this should have increased the sickness found in the non-humid mills as compared with the humid mills and thus vitiate the conclusion just given, comparison was made between two groups of mills, humid and non-humid, forming only a part of the total, which experienced (according to the measure adopted) only slight unemployment during the year in question. The sickness rates for these groups were found to be nearly identical with those already found for the totals, which suggests that unemployment was not a factor of importance in producing the sickness rates found to prevail. In addition to the stability of the rates makes it improbable that the results are due to the fluctuations of sampling. The classification of mills as humid and non-humid makes no allowance for the variations within these groups. To take this into account, wet and dry bulb temperature readings were obtained over a period of five months in the year of investigation. The mills were then classified according to these readings, and the sickness experience related to their dry bulb, wet bulb, relative humidity, physiological saturation, deficit, and combination of these variables. Although the groups thus obtained were often too small to give reliable results when taken alone, the rates were sufficiently consistent to make it justifiable to state that no significant difference in the sickness incidence was present within the range of variation found to exist. In addition no difference was found between the extremes in the humid group, i. e., between the "very dry" and the "very wet."



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Weavers' Division Discusses Plain and Fancy Work

(Continued from Page 14)

much less destructive. Bobbins treated in oil will stand more abuse than bobbins not treated. I have both.

Question: Is the Draper treated in oil, usually, or not?

MR. COBB: If you don't request it they will come untreated, because it requires another operation. You have to request it if you want them treated.

L. J. BISHOP, Overseer Saxon Mills, Spartanburg, S. C.: We had that trouble until we changed the disk, took off the small batteries and put on large batteries. We took off the frame disk and had no more trouble.

Should Loom Fixers Tie in Warps?

CHAIRMAN BLACK: Question No. 4 is next: "If you are on sheetings and drills, do your loom fixers tie in their warps? If not, how many looms do they keep in repair, and how many looms do your warp men take care of?" Let's hear from Mr. Garrison.

A. F. GARRISON, Superintendent, The Hartwell Mills, Hartwell, Ga.: Our loom fixers tie in their own warps and fix the looms. We have 72 looms per section.

Question: I should like to ask the gentleman what the numbers are and how often the warps run out.

MR. GARRISON: About fourteen days on sheeting. 4.25 and 3.75.

CHAIRMAN BLACK: Mr. Becknell is here from the Arkwright Mill. Let's hear from him.

W. W. BECKNELL, Superintendent, Arkwright Mills, Spartanburg, S. C.: We have a 60-loom section. On 2.35 and 2.75 drill, 27-inch, our warps run about eleven or twelve days on 60 looms a section.

S. T. BUCHANAN, Piedmont Manufacturing Company, Piedmont, S. C.: Mine run from 60 to 76; that is on three-yard drills. On four-yard sheeting, 4.75, 4.50, etc. We have two mills where we run what we call three- and four-yard sheeting. On the four-yard we make anything from four yards up to 6.14; on the three-yard we make from 2.50 up to 3.75, made out of the coarse warp, which is 13½ to 21. On the 21 we run up as high as 36. On the 13½ we run up to 60 or some few over, but most of them to 60.

CHAIRMAN BLACK: For your information, we had five answers which read "100 looms and do their own warping and take out fabrics." One answer said 60 looms, one 86, one 88, one 90, and one 84. Two did not answer the question at all.

Is there anyone present who has warp hands and loom fixers only repair the looms? If so, we should like to hear from you. Some have been advocating that system, asking why a high-priced man should spend his time tying in warps and taking out fabrics.

MR. LOCKMAN: For some time we have had that system but find it unsatisfactory, for the reason that the warp man wants to get through as soon as he can. He slaps the warp on the loom and leaves it. I consider tying in the warps very important.

Multiple Loom System

CHAIRMAN BLACK: Let's take up Question No. 5: "Have you in effect what is known as the multiple loom system and if so what do you gain by it?" Let's hear from Mr. Phillips.

More Looms Per Weaver

W. L. PHILLIPS, Superintendent, Social Circle Cotton Mills, Social Circle, Ga.: I think the South Carolina boys can give you more information than I can. I am putting in the multiple loom system now and have had it in operation only about two months. I got all my dope from South Carolina, so I don't see why you should call on me when I am new to that system. I will say this, when I first heard of it I thought it was impossible. From the reports of what the South Carolina mills were doing I said at first it could not be done. I continued to hear about it, so I got in my car one day and made a trip to South Carolina and went through some of your mills. What I saw there was astonishing. I told all my weavers to get ready, that we were going to take a vacation, and I brought the last one of them, except the master mechanic, and spent almost a week in South Carolina. By the time we reached home we were all convinced it could be done. I believe I have learned more about cotton milling in the last three months than in all my life before. We are on wide sheeting, were running ten, twelve, or sixteen looms, and paying on an average of \$22.50 for twelve 90-inch looms. Now we have our weavers running 22, 24 and 30 looms and hope to put them on 36. Our weavers are running 86 and 90-inch sheeting and 24 and 25-inch pillow tubing and 50-inch looms together. They do not do any warping. When we put in the system we had 27 weavers and thought we were doing well. Now we have 16 and hope to get down to 12 weavers. To do this you have to do your weaving in your carding and spinning. I was trying to do it in my weaving but found we had to do it upstairs. It took us several weeks to find that out, but now they have less trouble on 20 looms than formerly on 12.

CARL R. HARRIS, Inman: I am frank to say that my weaving is practically in the same shape that Mr. Phillips felt he was. I studied over the matter for quite a long while and am still studying over it. It is absolutely

essential, as he says, that you weave in the carding and spinning. To run the multiple loom system, as we are doing to some extent (we have only about one-fourth of the plant on that system), we have found we have to go to the card room and the spinning room and practically revolutionize things. We have not completed that yet, but it does take carding and spinning. At the same time, the weaving can not be neglected; the weave room has to be kept in better condition to run the multiple loom system than ever before; but it takes good yarn to do it. We are running 76 looms on 40-inch prints and getting away with it very successfully, but we hope to do even better than that.

W. W. COBB, Cateechee: I want to ask this question: Don't you have to go back further than the carding and spinning? I believe you have to go back to the cotton patch.

MR. HOWARD: We have had this system for four years and would not change back. We are doing the same with fixers. Our fixers are fixing 91 looms, practically all wide looms. We have seven fixers running 610 looms.

MR. LEISTER: How many looms are the weavers running?

MR. HOWARD: We have 48 to 100-inch. They run 32 on 90-inch goods.

CHAIRMAN BLACK: Let's hear from T. C. Drew.

Multiple System Proves Valuable.

T. C. DREW, JR., Converse, S. C.: We have been on the multiple loom system for eight months on 520 looms, and it is proving very satisfactory. Before putting in the multiple system we did what I heard Mr. Brown say he had to do; we gave the mill a thorough overhauling and cleaning out. We went to the carding and went to the spinning and saw to it that the looms were in apple-pie order. We have weavers running 56 to 60 looms. Those are Draper looms. We did have them on 70 to 72 but changed this week to 56 and 60. The loom fixers have 104 looms to fix.

MR. STONE: Has anyone used that system on coarse work, 14s and 15s? We hear about it on print cloth, but I should like to know if anyone is using it on numbers coarser than 20s.

MR. ALEXANDER: I should like to ask a question. Where the weaver runs 76 looms, who reports the loom being out of fix? (Laughter.) I want to know if the standard of pay is going to be raised all over the mill in proportion to the weaver's. When I was weaving and when I was fixing we had to watch the cloth for bad places, thin places and thick places. If he has to watch all these looms I am guessing that if he sees bad places he will turn his back. What becomes of all the work that was on the weaver's shoulders?

QUESTION: I should like to ask if anybody is using that system on looms that have filling feeders, and if anybody is using it on from No. 5 to No. 12 filling.

CHAIRMAN BLACK: I shall ask Mr. Howard to answer the question about who flags the loom when it is out of order.

MR. HOWARD: I don't see where he gets it that the weaver has to make any more money. Our weavers don't make any more than in the average mill. They must like it, because we have four who have been with us a good long time. It is not a question of how many looms a man runs; it is how many ends he puts in. It is all based on the ends per day or per hour. Take a loom where you have two ends per hour; a weaver can not run 76 looms. You have to get the end breakage down. The way we got at it, we figured there is a cause for every end breakage, and we found just as many causes as we could. When we started out we made a test (which we are doing all the time), and we found 33 per cent of the stoppage on our looms was caused by knots—not bad knots but good knots, as good a knot as any tier could tie. We changed around and got that down. You have to get the end breakage down.

Loom Stoppage.

MR. JEWELL: About what does the loom stoppage amount to? How many loom stops can the weaver take care of under this system?

MR. RIDDLE, Pacific Mills: We have about 1400 looms, and our weavers on 40-inch looms on 80 squares run 54 looms. On the lighter goods they run from 76 to 82 looms. We have been getting by very successfully for four years.

CHAIRMAN BLACK: I want to ask you one question. What about the loom stoppage—about the breakage of the yarn? About how many ends per hour or per day of ten hours would you have break to the loom?

MR. RIDDLE: We base our stoppage on 300 a day. They can go to 400 or as high as 450. We allow fifteen minutes out of every hour to rest. He can put up as many as 300 very successfully a day.

CHAIRMAN BLACK: About what percentage, Mr. Riddle, did you reduce the cost of weaving when you put in the multiple system?

Save 43 Per Cent of Cost.

MR. RIDDLE: I would say we saved \$800 to \$850 a week just in the one mill; that is at Lyman. That is just half of our looms. I suppose we really save \$1500 to \$1600 a week.

CHAIRMAN BLACK: You save about 50 per cent of the cost of weaving?

MR. RIDDLE: We figured it about 43.

MR. CHALMERS, Gaffney Spinning Company: About how much is the carding and spinning cost increased to keep down the weaving cost?

MR. RIDDLE: We didn't increase the carding and spinning cost any; we reduced the cost in spinning. Our spinners were running about 15 sides. We put a method into the spinning similar to what we did in the weaving, although we ran the carding and spinning something like a year before we put it in the weaving. You can not expect to put it in the weaving first.

15 Minute Rest Period Every Hour.

MR. LEISTER, Walhalla: Mr. Riddle says the weavers rest fifteen minutes out of an hour. Who runs the looms while the weaver is resting?

MR. RIDDLE: We figure that out of an hour he can get fifteen minutes' rest; we don't expect him to sit down and not run the looms. We do know from time studies that he works only 85 to 90 per cent of his time. Even on a 90-inch loom he can put up from 300 to 350 easily and then get 15 per cent rest.

MR. BOBO, Anderson Cotton Mill: I should like to ask Mr. Riddle if he has the cloth taken off and what else his weaver has to do. In what way and how much cloth is the man supposed to take off?

More Production At Less Cost

MR. RIDDLE: We have figures to show that we did increase our production and reduced our percentage of seconds when we put this method into effect. Before putting it in we had four men taking the cloth up from the weavers and delivering it to the cloth room. The same four men take off the cloth now, so many looms a day. The looms are stripped once a week. We pay no attention to cut. The same four men take off the cloth and deliver it to the cloth room. It did not add to the cost of taking off the cloth.

Battery Fillers

MR. STONE: I should like to know what is the standard for battery fillers. How many bobbins can battery fillers put in an hour?

CARL R. HARRIS, Inman: We work on a basis of 400.

MR. HOWARD: Ours are based on 11 a minute.

MR. RIDDLE: Ours on 8½ minutes to 41.

Question: I want to know if you pay by the pound or in what way you pay. What kind of harness do you use, cotton harness or reed harness, to get the best results? Do you pay by the time clock system or cut or how?

MR. RIDDLE: We pay by the pick. We use cotton harness.

MR. LOCKMAN: Someone said you had to go to the card room to get the multiple loom system to work. If it is good for the multiple loom system, why not for the old system? Couldn't we go back to the carding and spinning and make the work perfect and cut the cost of weaving under the old system?

Must Improve Carding and Spinning

MR. BELTON: We have been using it about eighteen months on the Drapers. We started in the card room and have gone through the weaving and put every part, carding, spinning and weaving, on the multiple system. Our spinners are running 30 sides. We found that to go into the multiple loom system it was absolutely necessary that not only the yarns be properly made but that the looms be properly fixed. In trying to determine the number of looms a weaver could handle efficiently, we found a great part of the trouble was not altogether with the yarn but with the loom. On the old system, where the weaver has 14 to 16 looms, we do not advocate it, none of us, I am sure; but we have weavers who take care of those things themselves. On the multiple loom system our weavers do nothing but weave; and they are scheduled to make cycles around their work, both back and front, at intervals in proportion to the number of ends they put in per hour, to keep those looms going; and it takes a lot of studying to apportion the time. Frankly, it made a tremendous difference in the number of stops on the loom per hour when we had been through the carding and spinning rooms. We made a test in the carding and spinning and weaving to determine why the ends came down. It comes back to carding and spinning. If we have good yarns I agree that all our troubles in the weave room would be ended, but I have never seen perfect yarn yet. We have weavers running 36 looms on sheeting; that is the coarsest thing up to broadcloth. Having a great many styles, our number of looms per weaver varies a great deal. For instance, we can not block it so that one man would have all 60s. We worked the loom set out on a basis of a certain number of stops per hour in addition to that man's warp. Now, warping is a very small item, but it has to be taken into consideration.

W. L. PHILLIPS: Someone asked why not go back and improve the carding and spinning under the old system. This can be done, but it will not be; we will not do it. When I went into it, it made me shut down half my spinning. In other words, I have some old (1900) spinning frames. I also have some 1925 Saco frames and was running them side by side. We found that the yarn from the old frames broke seven pounds weaker than from the new and that we had about 75 per cent of the stoppage from the old frames. We shut the old frames down and ran the new night and day. We went to the spooler and warper and found it would pay us to throw out the old and put in new, and we did that. We reduced the loom stoppage from 2 stops per hour to 1.3. We had thought 2 stops an hour was good, but

(Continued on Page 20)

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Georgia Mills Give \$1,000 in Cotton Growing Prizes

At a meeting of the Executive Board of the Cotton Manufacturers Association of Georgia, held in Atlanta several days ago, it was unanimously voted to again contribute to the State College of Agriculture a sum of \$1,000, to be used by them as prizes in their "More and Better Cotton Per Acre Contest", for 1928. A similar sum was given by this Association for the 1927 contest, and the results were so successful that the mills agreed to participate in this plan again this year.

Up until 1927 this contest was conducted strictly on the basis of yield and cost of production per acre, the character and staple of the cotton produced not being considered. Prior to the beginning of the 1927 contest, the mills succeeded in getting the college to add another phase to their contest — that of improving the staple of the cotton so that the cotton grown would meet the spinning requirements of the Georgia mills. To this end they gave \$1,000 for prizes, and it is for this same purpose that the contribution is being repeated again this year.

At the annual Farmers' Conference held in Athens, recently, Doctor B. Youngblood of the United States Department of Agriculture, stated that only fifty per cent of the cotton grown in Georgia was actually consumed by Georgia mills, the balance not being able to meet the spinning requirements by the mills, so that it was necessary for them to go out of the State for at least fifty per cent of the cotton which they used. During the past year the Cotton Manufacturers Association of Georgia has made a complete survey of the Georgia mills and have ascertained the amount of cotton, of various lengths and character, which are required in the Georgia mills. All this information was turned over to the college of agriculture to assist them in inducing the farmers of Georgia to grow the cotton that can be sold direct to the mills in their respective communities.

It has been proven the past several years that such cotton can be grown both efficiently and profitably by the Georgia farmers and by encouraging the growth of this cotton, it is hoped to meet the competition that is rapidly growing in the States west of the Mississippi river, where the average cost of growing cotton is lower than in Georgia. The Georgia mills would most prefer purchasing their cotton directly from the Georgia farmers and in most cases they are willing to pay the extra premium for cotton that is of the higher and better grades.

Already this year a number of Georgia cotton mills have purchased high grade cotton seed in carload lots and distributed them among the farmers in their communities. This plan has been used by several of the mills for the past few years, and they all report that it has met with much success. The grade and staple of the cotton in these communities is gradually being improved and it reacts to the benefit of the mill and the farmer alike. The farmer gets

the extra premium for his cotton by selling it direct to the mill, and the mill is able to purchase much of its cotton requirements right in the mill community.

One mill is conducting five experimental farms to determine the best variety of cotton that can be grown in that community, and many other mills are using various plans of encouraging the farmers in their communities to grow cotton suitable for spinning at the local mills.

It is hoped that in time, with the help and cooperation of the State Agricultural College, the Georgia mills will be able to purchase a large portion of their cotton directly from the farmers in their sections and this will be of great advantage, both to the producer and the manufacturer. This plan in connection with the intensive campaign being conducted by the mills to extend the present uses of cotton and to find new uses for this fibre should prove of great help to all branches of the textile industry, and help to make cotton the king again in Georgia as well as in the rest of the South.

Mills Making Flat Duck Considering Curtailment

New Orleans, La. — Reduction in operating time to a 40-hour week, or a reduction of 28 per cent, with a proportionate decrease from normal production, was indicated as a forthcoming move of individual manufacturers of flat cotton duck following a conference here of members of the Cotton Duck Association in which discussion revealed that stocks on hand were increasing, due to production in excess of market requirements.

Manufacturers expressed opinions indicating that a reduction in operating time should have been effected as far back as October 1.

Manufacturers were informed on what is being done by the Cotton-Textile Institute and cooperating agencies in promoting new and reviving old uses for cotton goods by E. C. Morse, who represented the New Uses Group of the Institute.

Among the most interesting points developed was the open competition between architects for prize awards for designs in awnings, which will be announced in the March issue of Architecture. The competition is supported by the Awning Fabric Manufacturers in the Cotton-Textile Institute, with the Architectural League of New York as technical advisers.

Mr. Morse urged the manufacturers to aid their own industry by utilizing supplies and materials made partially or in whole of cotton.

A message from Walker D. Hines, president of the Institute, called attention to voluntary action already taken by mills in other lines of the textile trade in adjusting production to market requirements.

Harry L. Bailey, of Wellington, Sears & Co., Boston, presided. Other manufacturers present included: J. C. Saunders, of Bonham & Pelham, Texas; A. L. Smith, Hillsboro, Tex.; C. T. Harris, of Monticello Cotton Mills Co.; Sidney J. Files, Itasca Cotton Manufacturing Company, Itasca, Tex.; R. E. Benson, Jr., Hunter Manufacturing & Commission Company,

New York City; R. B. McMahon, Gaudalupe Valley Cotton Mills, Cuero, Tex.; John B. Saunders, Gonzales Cotton Mills, Gonzales, Tex.; Norman S. Hope, Wellington, Sears & Co., New York city; Clinton Phelps, Sherman Manufacturing Company, Sherman, Tex.; E. S. Cunningham, Wellington, Sears & Co., New Orleans; T. A. Adams, South Texas Cotton Mills, Brenham, Tex.; W. B. Manson, Jr., Denison Cotton Mills, Denison, Tex.; W. Hogg, Dallas Cotton Mills, Dallas, Tex.; L. G. Walker, Walker Cotton Fabrics Company, Chicago; E. S. Dubose, San Antonio, Tex.; W. L. Steele, Brazos Valley Cotton Mills, West, Texas.

H. V. Bailey was reelected chairman of the association. W. Hogg, of the Dallas Cotton Mills, Dallas, Tex., was retained as vice-chairman, and W. L. Steele, of the Brazos Valley Cotton Mills, West, Texas, was named permanent chairman. All three were named by acclamation.

The manufacturers also decided to continue their investigation into cost accounting in cooperation with the Cotton-Textile Institute, terming this a most important subject and expressing approval of the plans of the Institute to develop a manual on costs.

The meeting was originally scheduled for a two-day session, but adjournment was effected late Thursday.

Cotton Fabric For Highway Work

A new cotton fabric designed for use in highway construction has been perfected as a result of research conducted by the Cotton-Textile Institute, Ernest C. Morse in charge of the New Uses Section announced during an address at a meeting of manufacturers of cotton duck in the Hotel Roosevelt, New Orleans.

This new fabric was developed in the experimental cotton mill in the Bureau of Standards in Washington by the A. A. Mercier, Research Associate of the Institute on specifications devised by F. R. McGowan, textile engineer on the staff of the Institute. Samples have been submitted to highway engineers, Mr. Morse stated, and one engineering firm has already asked for bids on 300,000 yards of the material.

The new fabric is a loose cotton concrete highways. It is laid over mesh for use in the construction of a cement base and on top of the fabric the surface of the roadway is molded. The layer of fabric serves as a cleavage between the surface of the road and the foundation so that in case of repair the top layer of roadway may be removed and a new surface installed without impairing the more permanent foundation.

It is expected that at least a million yards of the fabric will be consumed this year, and in a period of three years, upward of five million.

"This new fabric will mean entirely additional consumption of cotton" says Mr. Morse. "It is also significant that a low grade of cotton can be used in making this mesh fabric because strength is not a factor beyond requirements for hand-

ing and laying it on the concrete foundation."

Mr. Morse also reviewed the work which the New Uses Section of the Institute has done during the past year in promoting the use of heavy cotton fabrics for such purposes as awnings, road markers, traffic guides and bagging. He said that as a result of the new interest in promoting the use of cotton, 250,000 bags of starch had been shipped in cotton containers during the year which previously had been shipped in other material. This represents the additional consumption of 250,000 yards of cotton fabric. One State, he points out, by stipulating that the cement to be used on public works be shipped in cotton, was responsible for the additional use of 430,000 cotton bags, or 310,000 yards of cotton material.

Plans of the New Uses Section in promoting the use of heavy cotton fabrics will include continued research and cooperation with Governmental agencies, particularly in extending the use of cotton for agricultural purposes.

NOTE: Mr. Morse described the new fabric as a cotton mesh, counting from 2½ to 3 threads per inch in both warp and filling. It is made of No. 2½ yarn, and is woven thirty-six inches wide. According to Mr. Morse this new material may be produced readily in cotton mills without extensive changes in equipment.

European Industrial Conditions

Washington, D. C. — Level of industrial production and trade remains high and relatively satisfactory in Northern and Central European countries, notwithstanding usual seasonal slowing up in many lines in November, official advices to Department of Agriculture state.

Seasonal factors tended to prevent improvement in France, Italy, Denmark and Norway during November, but conditions are better than a year ago in these countries. In the absence of any major disturbing factor, there is no reason to expect any material change in general conditions affecting European buying power in the immediate future. Employment is likely to be much better this winter and wage levels higher in Germany. An outstanding feature of the British economic position was the increase in domestic exports in November to the highest point since July, 1924.

As to Germany in particular, reports state there was little change in the general business situation up to the middle of December. Majority of industries continue to enjoy a relatively high level of activity. Public opinion as reflected in the Germany stock market recently has shown a revival of confidence in the outlook for further good business this winter. Situation, however, is fraught with factors, almost any one of which might develop into a serious obstacle to a further satisfactory improvement in business. None appears especially threatening at this time, however, department states. Financial situation continues

the most uncertain factor and the most dangerous from the standpoint of the possible consequences of an unfavorable development. German cotton requirements probably will decline in coming months. Orders in cotton mills continue to decline and the Bremen market has been quiet for several weeks. Require-

Consumption of Cotton Higher

Washington, D. C.—The per capita consumption of cotton cloth has increased from 25 to 64 square yards in the last 25 years, the department of agriculture has found in a survey of domestic mill requirements in grades and staples.

This increase, the survey showed, was caused by the increased use of cotton in automobiles, rubber goods, wall coverings, awnings, leather substitutes, and other relatively new articles, and was made despite the decrease in the amount required and the advancing competition of jute, rayon, silk, and other textiles.

Type staples of cotton were gathered from 11,000,000 active spindles of the approximately 34,000,000 spindles in the United States, and the department's experts declared that of all lengths consumed the strongest demands is for varieties 15-16ths of an inch to one and one-sixteenth inches in length and middling to strict middling in grade.

Below seven-eighths of an inch, consumption falls off rapidly, amounting to less than one per cent of the total, the report showed, advising growers of American upland short staple cotton to produce varieties at least one inch in length, in order that saleable lint could be produced even in unfavorable years.

Importance of the Export for Cotton

In the opinion of many, the outstanding events in the year 1927, from the cotton manufacturers standpoint, have been the growth and development of the Cotton-Textile Institute, with its many correlated activities, and the awakening of the textile market to the necessity of export expansion, says an article written for the Cotton Trade Journal by Floyd W. Jefferson, of Iselin-Jefferson Co., New York.

In spite of the enormous growth of population in the United States, and regardless of the many new uses which have been found for cotton goods, the developments of the past few months have clearly demonstrated that the cotton mills of this country have a capacity of production greater than this country can absorb.

So long as this condition exists uncorrected, it will be impossible for the great cotton manufacturing plants of this country to realize a margin between cost and sale price commensurate with the profits required to represent a fair return to capital on investment.

Statistics available through the Cotton-Textile Institute and through the New York Association of Cotton Textile Merchants have flashed the danger signal, and corrective measures have been adopted. Curtail-

ment, however, at best, is a negative cure, whereas a positive and salutary solution should be found in the expansion of our foreign trade.

Export is a market which has attracted the attention of many of our merchants but few of them have approached the problem adequately prepared to meet all of its exacting conditions. England, Germany, France, Italy, Switzerland have successfully exported the products of their looms, and the very exigencies of the situation have made it necessary for them to study the needs and requirements of the markets to which they have sold. Our merchants, by reason of the same exigency, must now adopt similar constructive measures.

The mill of tomorrow cannot afford to tie up its merchandising policy with a commission house that is unprepared to sell an appreciable percentage of its product abroad. The ability to capture volume business in foreign fields has been definitely demonstrated by several progressive New York houses and the tendency of the times is toward well organized, efficient export departments in every large distributing agency.

It is true that this requires a tremendous outlay of money and time, and that an export division must be headed by a man capable not only of speaking several languages, but with sufficient knowledge of tariffs, foreign exchange, export conditions and credits to properly supervise the intricate details of the business.

One of the great dangers is that manufacturers will fail to realize that foreign markets should not primarily be regarded as dumping grounds for surplus merchandise. For one thing, there are rigid anti-dumping restrictions abroad, but more than that is the fact that such business leads nowhere.

The organization of foreign business, if it is to succeed, must proceed with the same patience, the same study and imagination which the problem of distribution is receiving in this country.

At the present time about 7 per cent or 8 per cent of American textile production is sold for export and if intelligent merchandising is able to bring this up to 12 per cent or 15 per cent, there will be no further need of curtailment, and American cotton mills will enter upon a period of activity and prosperity.

The present agitation for the inauguration of a large textile export organization is evidence of the need which the industry feels, and it is at the same time evidence of the reluctance of commission houses in general to undertake this service.

The cotton mills of this country recognize that there is an additional risk involved in doing business with foreign countries, and the progressive manufacturers are willing to share part of this burden with their selling agents, and with this fair understanding between manufacturer and commission house, we predict that there will be further awakening and that through this cooperation American products will find their way in increasing volume not only to Cuba, Porto Rico, Central and South America, but to the Continent and the great remote markets of the tropics and the East.



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DUPLAN

Weavers' Division Discusses Plain and Fancy Work

(Continued from Page 17)

when we went into the new system we had to trace them back. We hope to get it down to .75 stop per loom per hour.

W. R. McELVEEN, Superintendent, The Langley Mills, Langley, S. C.: I have 19 numbers of filling on 312 looms. I should like to find out how to run a multiple system on that—in other words, have a battery filler fill the batteries with four or five different numbers of filling.

MR. DUNCAN, Spartanburg: We have about ten numbers on 700 looms. We have most of our battery hands blocked so they have the same numbers of filling. In cases where they are not we have small trucks that carry small boxes of yarn. At those places where the looms change we have a station where they just change boxes. If there is a big variation in the numbers you have to cut down the number of batteries per battery hand to the extent where I am not so sure it would be profitable. That battery hand must make a cycle in the time it takes eight or ten looms to run out. I am glad I haven't the proposition he has. Only one thing occurs to me; you might have filling boxes on the loom, have a box attached to the loom with the proper number of filling in it. In that way there would be no chance of mixing the filling. You might reduce the number of looms so she can take care of the coarser fillings.

MR. McELVEEN: We tried out the multiple system on the same 312 looms two years ago, but I found I could not block it out. We went to the carding and spinning first and saved 33 per cent. We find the weavers are making more, but we are still saving 33 per cent.

MR. WOFFORD: This is no big bugbear; I have seen one man run 76 looms and get as much rest as I do, stand around with his arms folded. You have to fix the loom. As to all of this being laid back to the spinner, while I know most spinners are fat and lazy, you will find a good many stops are due to mechanical things. Spinning does play a mighty important part in weaving, but we have learned to look behind the loom as well as in front, and when the weaver gets behind the loom he will prevent a good many stops. It is a hard job to get a weaver to get out of the alley and go back behind the loom. You have to have good cotton—extra good cotton, a good carder, a good spinner, and a tremendously good weaver to teach this multiple system to your help.

Good Cotton Essential

W. W. COBB, Superintendent, Norris Cotton Mills, Catechee, S. C.: I was down at Pelzer looking over this multiple loom system and talked it over with the man there. He said better not go into it if you haven't a cotton grader, for you must have the cotton uniform in staple, grade, and character.

Question: Don't you think that ought to be done in all cases, whether one has the multiple loom system or not?

MR. COBB: Yes, but I am like Mr. Phillips; it will not be done.

MR. ALEXANDER: I want to ask how much they have reduced the manufacturing cost.

MR. HOWARD: I will say this; we reduced the cost in every department. I could tell you how much, but I am not going to.

J. H. COBB, Cloth Room, Walhalla Plant, Walhalla, S. C.: I should like to know if those on this multiple system have reduced the seconds by using it.

CHAIRMAN BLACK: Mr. Riddle claims he reduced his.

MR. HARRIS: We did when we put it on; we reduced our seconds and increased our production.

Question: Were the seconds reduced in the weave room or in the card room or the spinning room?

MR. HOWARD: Reduced in all the rooms.

All Departments Must Help

MR. HARRIS: Talking about seconds, as Mr. Howard says, they are reduced in all the rooms. We went through all the rooms, carding, spinning, bobbins, warp, and are now doing it on weaving, trying to help the weave room. Of course, there were a number of things that we did in carding and spinning outside of that, but it has to be carried all the way through, in carding, spinning and weaving.

CHAIRMAN BLACK: I can understand how this system might be practicable in a weave room of more than 2,000 looms, but is it practicable in a small room, say, of 300 or 400 or 500 looms? Have any of you tried it in a small room?

MR. DREW: We have it on 500.

MR. PHILLIPS: We have it on 380.

MR. ALEXANDER: I was wondering if in a big mill you wouldn't have to keep a big array of overhaulers or whether the regular outlay of section men, etc., could keep the standard.

MR. HOWARD: You would probably find you would have to get some extra overhaulers to get it into that shape, but you wouldn't have to keep them.

MR. RIDDLE: To my knowledge, in fourteen years we have not had to overhaul. Each section man is responsible for his section.

MR. LEISTER: Is any special attention given to the room in regard to

humidity and temperature over and above what it was before the system was adopted?

MR. HARRIS: We put in a complete new equipment.

MR. HOWARD: We check ours every two hours—make a record every two hours.

Question: You have the Carrier system?

MR. HOWARD: Yes.

MR. HOWARD: I can not tell you.

MR. BETSON: How many looms per weaver and per loom fixer and how much was the cost per pound reduced in the weave room and each other department in the mill on shade cloth?

Savings on Shade Cloths

CHAIRMAN BLACK: Is there any one on shade cloths that can answer this question?

MR. DUNCAN: I am running shade cloths on the same looms I am running prints. On 64 and 60 shade cloth it is practically the same as prints.

MR. BETSON: How many looms per weaver?

MR. DUNCAN: 52.

MR. BETSON: How many per loom fixer?

MR. DUNCAN: 80.

MR. BETSON: What is the wage scale?

MR. DUNCAN: The wage scale is the same on shade cloth as it is on print cloths. We try to give them a full job.

In regard to humidity, we have to give it special attention; we have to give everything else special attention. There is no single item I can think of that you can pass up and leave some on the old system and run the multiple system successfully.

MR. BETSON: Can you tell me how much more the stoppage is on shade cloth than on prints and sheetings? Is it less or more? And is the stoppage in the filling or warp?

MR. DUNCAN: Of course, you have additional stoppage; you have filling stops. It should be more.

MR. BETSON: Do you use the feeder on the shade cloth, and can you run as many looms?

MR. DUNCAN: We are going back to the feeder.

CHAIRMAN BLACK: Any more questions?

MR. BOBO, Anderson: I should like to ask those of you who use battery hands on what basis you pay them. I am paying by the piece. Is that the most practicable way or is there a better way? Do you pay by the piece or by the battery or by the day?

MR. RIDDLE: We pay ours by the battery.

MR. RAMEY: We pay ours by the battery.

CHAIRMAN BLACK: They seem to pay by the battery.

MR. PHILLIPS: If you eliminate the filling box and give the battery hand a truck to roll around in front of him he can fill more bobbins than where he has to dig it out of the boxes.

Heavy Sizing of Warps

CHAIRMAN BLACK: We shall now take up Question No. 6: "Does it pay to size heavy or attempt to load sheetings or drill warps? If so, what do you consider a reasonable percentage?" Of the answers we received, two said 7 per cent; one said 8 per cent; two said 10 per cent; five answered: "It does not pay to attempt to load these goods." One said 9 per cent, and the other didn't answer. I should like to hear from you on the subject of the extent of sizing the yarns.

S. T. BUCHANAN: We are on coarse goods, and we try to put in sizing to 8 per cent and also leave moisture to 8 per cent.

CHAIRMAN BLACK: Let's hear from Smith Crowe.

SMITH CROWE, Superintendent, Drayton Mills, Spartanburg, S. C.: I am not in a coarse goods mill. We vary our sizing according to the different work that we run. In our mill we run from very soft twist warp to crepe warp, soft twist, regular, voile and crepe. Our percentage of size runs from 4.75 to 5.5.

CHAIRMAN BLACK: What is your percentage, Mr. Davis.

W. F. DAVIS, Superintendent, Brandon Mills, Greenville, S. C.: My weaver is here, and he can tell you more about that than I can. Please call on Mr. Dill.

Per Cent of Size Varies With Product

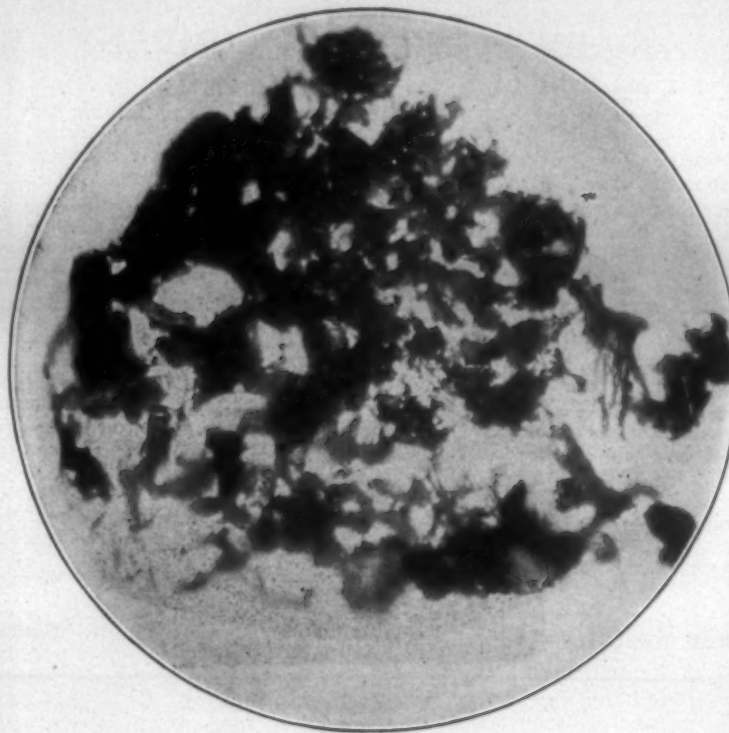
C. P. DILL, Overseer Weaving, Brandon Mills, Greenville, S. C.: I think the sizing you put on the yarn should vary according to what you want to make. There are some goods you might want to size a little heavier than others. On our 80 squares we size around 10 per cent. We have a system whereby we can check the size at any time we want to. We have the beams all weighed and the weight marked on the head of the beam, and the slasher man can weigh every warp. We run anywhere from 9 to 11 per cent on bag goods, 80 squares, and broadcloths 90x60 and 100x60.

CHAIRMAN BLACK: Our time is up, and I shall relinquish the chair to Carl R. Harris, of Inman, who will conduct the discussion on fancy weaving.

CARL R. HARRIS, Assistant Superintendent, Inman Mills, Inman, S. C.:

(Continued on Page 26)

Photo-Micrographs Tell the Story of



Tycos System of Slasher Control

Here's a cross section of No. 13.55 yarn, magnified about 220 times.

The dark portion is the size mixture as it has been put on (and into) the yarn with the aid of the Tycos System of Slasher Control. Note how the size has penetrated to the very center of the yarn and that the size coating is heavy and binding.

The yarn, slashed in this manner, is ready for smooth operation on the looms. It has the correct moisture content for the elasticity so necessary for maximum weaving results. The fibres are tightly bound in for smooth running. The size coating is uniform and tough to prevent wear and chafing. It is pliable to decrease shedding.

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Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Published Every Thursday By

CLARK PUBLISHING COMPANY

Offices: 18 West Fourth St., Charlotte, N. C.

THURSDAY, MARCH 1, 1928

DAVID CLARK
D. H. HILL, JR.
JUNIOUS M. SMITH

Managing Editor
Associate Editor
Business Manager

SUBSCRIPTION

One year, payable in advance	\$2.00
Other Countries in Postal Union	4.00
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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

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When Agitators Should Be Ignored

THE recent attacks upon the cotton manufacturing industry of the South by Bishop James Cannon, Jr., Paul Blanshard and other professional agitators have aroused such a feeling of resentment that they may prevent the completion of adjustments that were being considered throughout the industry.

The very fact that men and women of that type, who have no connection with the textile industry and have no knowledge of textile conditions, are making demands under the cover of repeated attacks, has caused many mill men to express opposition to any changes.

We call attention to the fact that no changes in Southern labor laws have ever been made as the result of the work or attacks of agitators such as are now assailing the industry.

Every advancement of standards has come with the consent and approval and usually at the suggestion of men within the textile industry who have sought such laws as would be fair to the mills and to the workers.

The last child labor law enacted in Georgia for the purpose of raising the minimum age limit had the almost unanimous approval of the cotton manufacturers of that State, but met such opposition from mill employees and farmers that it came near being defeated.

We know that leaders throughout the industry have for some time been discussing certain adjustments and we believe that they should absolutely ignore the professional agitators who exist both within and without our colleges and should continue to consider such charges as are for the best interest of the

industry, both from the standpoint of the employee and the employer.

One matter under discussion is the 55 hour week. It was legally adopted about eight years ago by South Carolina and at that time most of the mills in other Southern States voluntarily adopted that schedule.

Since then many of the mills in States, other than South Carolina, have slipped back to the old "60 hour per week" basis.

Public sentiment is opposed to a week longer than 55 hours and by continuing to refuse to comply with that sentiment mills are furnishing ammunition for the labor unions and agitators who seek the "48 hour week" as a stepping stone towards the "44 hour week" and later the "40 hour week."

We join many of the leaders in the industry in believing that the "55 hour week" should apply to every Southern State.

There is much discussion upon the subject of the night operation of mills.

We occupy a middle ground between those who believe that all night operations should be abandoned entirely and those who contend that there should be no curtailment of night work.

In considering night operations there is a factor entirely aside from the welfare of the employees and that is the ability to quickly expand production through night operations.

Within four years the monthly spindle hours in the South have been as low as 3,298,000,000 and as high as 6,099,379,000.

No industry is upon a sound basis when it is possible to expand production approximately 100 per cent.

A period of greater profits for cotton mills began in the summer of 1926 and the following figures of

monthly spindle hours, using those of every other month, shows how spindle hours were stepped up.

	Spindle hours
July, 1926	4,445,543,000
Sept., 1926	5,323,958,000
Nov., 1926	5,600,997,000
Jan., 1927	5,501,425,000
March, 1927	6,099,379,000

In July, 1926, the South operated 4,445,000,000 spindle hours and had that scale of operation continued until March, 1927, very substantial profits would have resulted.

However, as the demand and profits increased, additional spindles were quickly started on night run and the increased production as the result of such night operations was sufficient to neutralize the demand and prevent a normal increase in the margin of profits.

As mill after mill joined those operating at night the monthly spindle hours rose to 6,099,000,000 per month which was almost a 50 per cent increase.

We do not think that at this time it is possible or advisable to prohibit the night operation of cotton mills, but we do think that it should be made more difficult by raising the minimum age for night employment from 16, which now prevails, to 18 years.

It appears to us that mills operating regularly at night should be the strongest advocates of this change because while it might cause slight inconvenience to mills with a regularly organized night run, it would make it very difficult for day run mills to quickly get together a night force in periods of prosperity.

Suppose a mill is operating regularly on a double shift, as were many mills in July 1926, when the spindle hours were 4,445,000,000, and there occurs a sudden demand which increases the margin of profit.

Under such circumstances a night and day mill would be able to book business at a good margin of profit, if it were not for the fact that they have to compete with an ever rising production which results from day run mills putting their spindles and looms on night operation.

If the minimum age for night employment was 18 years, the day run mills would be much slower to begin night operations and the mill with a well organized night line would greatly profit by not being so quickly faced with additional competition.

It seems to us that the mill which regularly operates both day and night should be the greatest advocate of the 18 year restriction, as it would make it more difficult for other mills to begin night operations and to use their increase of production for the destruction of profits.

The agitators seem to be inclined to concentrate their fire upon the mill village and upon the employment of those between 14 and 16 years of age for more than eight hours per day.

The attack upon the mill village was begun by Thos. F. McMahon and other union leaders who discovered that the mill village made unionization a much more difficult problem.

Tannenbaum, Blanshard, and Bishop Cannon have attacked the mill village because union labor

wanted it attacked and not because they believed any of the charges they made against the villages.

Prominent ministers of the South, who know the mill village, deny every charge made by the agitators. Mill villages are built to meet the demands of the employees for them and not because the mill desires to keep the employees in mill owned villages.

Labor unions put the "8 hours between 14 and 16 years of age" in the Federal Child Labor Laws as an entry wedge for a national eight hour law.

The recent advocacy of such a provision by the National Association of Manufacturers, a New England controlled organization, was in our opinion part of an effort to force the South to the same standards as New England.

There has never been any evidence of any injury resulting from allowing those between 14 and 16 years of age to work more than eight hours and the mill employees themselves are unanimous in opposing any such limitations.

There should be no compromising or yielding of this point by cotton manufacturers of the South.

A 55 hour law is right and is in accord with public opinion.

An 18 year minimum age limit for night work is not only in accord with public sentiment, but as a means of preventing quick expansion of production in periods of prosperity would greatly add to the profits of cotton manufacturing. Its greatest advocate should be the mill with a well organized night line.

In considering such additional restrictions as are advisable, the industry should ignore the attacks of the agitators and meddlers and proceed to advocate those things which they think will be best for both the employers and employees.

Y. M. C. A. Responsible

THE Secretary of the Y. M. C. A. at the University of North Carolina, writes us that when Paul Blanshard visited the University neither his fee or expenses were paid with University funds, and we are glad to be advised of that fact.

Paul Blanshard served a term in jail for disloyalty to the Government during the World War and has said in an address:

"I am an American only by accident of birth. I do not believe that I have any moral obligation to stand for America."

The secretary of the Y. M. C. A. at the University of North Carolina says that he is responsible for such a man lecturing before the students.

No wonder Blanshard could say in his article in "The Survey."

"The last college year has witnessed a further drift towards the left by the college Y. M. C. A."

Acreage and Boll Weevils

GARSIDE Bureau says: "Our latest survey points to acreage increase of about 5 per cent. Largest increase shown in States where labor is plentiful and production costs low. Survey shows live weevils in 381 counties vs. 304 a year ago."

Personal News

W. A. Carmichel, of Columbia, S. C., will be president of the New Pilot Knitting Mills, Lexington, N. C.

T. J. Prince has become overseer of winding, spooling and warping at the Patterson Mills, Rosemary, N. C., succeeding the late C. L. Garner.

E. H. Thomas has resigned as overseer weaving at the High Shoals plant of the Manville-Jenckes Company, High Shoals, N. C.

Virgie Davis, formerly of the Merimack Mills, Huntsville, Ala., has become second hand in spooling at the Flint River Cotton Mills, Albany, Ga.

M. L. Wiggins has been promoted from second hand to overseer weaving at the High Shoals plant of the Manville-Jenckes Company, High Shoals, N. C.

Geo. H. Anderson, president of Virginia Manufacturing Company, Fork Shoals, S. C., has returned from a business trip to Philadelphia.

A. N. Sifford, who has been acting as secretary of the Blacksburg Spinning Mills, Blacksburg, S. C., has been formally elected to that office.

G. E. Dombart, public accountant of Charlotte, is one of the organizers of the Southeastern Bleach and Dye Works, which will establish a plant at Salisbury.

J. A. Talford has resigned his position at the Jackson Mill No. 1, Iva, S. C., to become master mechanic at the Grendel Mill No. 2, Greenwood, S. C.

J. E. Still has resigned as section man at the Greenwood Cotton Mills, Greenwood, S. C., to accept a similar position at the Ninety-Six Mills, Ninety-Six, S. C.

O. T. Ross has resigned his position at the Drayton Mills, Spartanburg, S. C., to become second hand in carding at the Whitney Manufacturing Company of the same place.

F. L. Still, superintendent of the Victor plant of the Victor-Monaghan Mills, Greer, S. C., will hereafter also act as superintendent of the Apalache plant, Arlington.

Walter Pate, who has been with the Hannah Pickett Mills, Rockingham, N. C., has become overseer carding at the Springfield plant of the Morgan Mills, Laurel Hill, S. C.

R. H. Giggins has resigned as overseer of spinning at the Pomona Mills, Greensboro, N. C., and accepted the position of overseer of spinning, spooling and warping at the Connecticut Mills, Decatur, Ala.

George Rubright has resigned as manager of the Glorie Underwear Mills, Eufaula, N. C., after having served in that capacity for 4 years. He has accepted a position in Reading, Pa., his former home.

J. M. Kennett has resigned as superintendent of the Mooresville Cotton Mills, Mooresville, N. C. He has been connected with these mills for 30 years and has been superintendent over a long period.

J. F. Fry, who recently resigned as overseer weaving at Pomona Mills, Greensboro, N. C., a position which he filled for 6 years, has become overseer of weaving, quilling and cloth room at the Anchor Mills, Huntersville, N. C.

Harry W. Mosely, newly elected president of the Greenville Textile Club was formerly installed at the meeting of the club last week. He is with the Victor-Monaghan Mills, and succeeds J. D. Whitmire, who was president last year.

C. G. Voss is now agent and superintendent of the Bloomfield Manufacturing Company, Statesville, N. C., but does not have charge of the Paola Mills, as was reported through error last week. M. L. Poovey continues as superintendent of the Paola plant.

J. Ogden Wells, president of Cooper-Wells and Co., Richard Lieberknecht, of the Karl Lieberknecht Company; Louis Hirsch, New York representative of Cooper-Wells & Co., and Ernest Blood, president of the True Shape Hosiery Company, Philadelphia, Pa., recently visited the full fashioned hosiery mill of Cooper-Wells & Co., at Decatur, Ala.

H. B. Jones, of LaGrange, Ga., has been elected president of the Southern Textile Athletic Association. Other officers elected were J. D. Brown, Victor-Monaghan Mills, Greenville, vice-president; John Corraux, Judson Mills, Greenville, second vice-president; C. W. Verner, Piedmont Mills, Piedmont, treasurer and Leonard Howard, Dunbar Mills, Greenville, secretary.

Church Is Gift Of Hanes

Winston-Salem, N. C. — The contract for the construction of a modern church building for the Hanes Methodist Episcopal Church, at Hanes, has been awarded to Fogie Brothers Company of Charlotte, and work is to be started at once. It is expected that the building will be ready for occupancy early in the summer.

The new building, a gift to the congregation by P. H. Hanes, Jr., is to be of brick construction, with limestone trimmings. The main section and an L are to be constructed now and provision is made in the plans for addition of another L at a later date.

The main auditorium will have a seating capacity of 171 to 200 people, and the Sunday school department, to be complete in every detail, will include about eight class-rooms of large size.

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MILL NEWS ITEMS OF INTEREST

Greenville, S. C. — The Piedmont Shirt Factory has begun operation here. The company was organized some weeks ago and is the first of its kind in Greenville.

Dallas, Tex. — William Carter Co., Needham Heights, Mass., reported, considering Dallas as site for knitted underwear plant.

Gadsden, Ala. — A new England mill is planning to move its plant here, according to information received by the Chamber of Commerce.

Lexington, N. C. — The Pilot Knitting Company has been organized here and will install 100 knitting machines on hosiery. A building has been leased and equipment will arrive within a short time. W. A. Carmichel, of Columbia, S. C., is president of the company.

Gastonia, N. C. — The Gastonia Weaving Company is making good progress in building an additional unit to its plant here, which produces woven labels. As soon as the construction is completed, 30 additional jacquard looms will be installed. The company was established some years ago and has been very successful. Harry Musard is manager.

Columbus, Ga. — Eagle & Phoenix Mills, W. C. Bradley, president, has let contract to Williams Lumber Company, for mill addition; two stories, 65x150 feet; structural steel beams; metal roof, wood floors; sprinkler system; cost \$45,000; J. P. Bradfield, in charge of work; C. F. Hickman, architect.

Richmond, Va. — Machinery for the new Scottsville Braid factory has been arriving in carload lots for several days from the former location of the concern in New York. Herman Aldeman, who will be in active charge of the factory is supervising the removal of the machines to the factory building on Valley street. It is expected that the factory will begin operation by March 1.

Winston-Salem, N. C. — The P. H. Hanes Knitting Company resumed payment of dividends on the common and Class B stock with the declaration of 15 cents a share on both stocks, payable March 10 to holders of record February 29. The last quarterly payment was 20 cents a share on January 1, 1921.

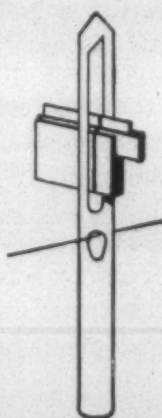
Burlington, N. C. — Another large processing company is coming to Burlington and will be located in buildings in East Burlington, one of which is reported to be the former Keystone paper box factory building. Because of certain details involved in transfer of the machinery to this city the company does not wish at this time to give its identity, the exact type of processing it will engage in nor the city from which it is removing its operations.



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and Detail Plans
Supervision of Landscape and
Engineering Construction

Largest Landscape Organization in the South

Asheboro, N. C. — J. C. Bossong and Charles Bossong, of New York, have completed arrangements for establishing a full fashioned silk hosiery mill here. Two-thirds of the cost of the building is to be raised locally.

Knoxville, Tenn. — Major George L. Berry, president of the International Printing Pressmen's and Assistants' Union, at Pressmen's Home, Tenn., near here, and others have organized a company to start a textile plant at Rogersville, 12 miles from Pressmen's Home. Major Berry owns extensive land holdings and other business interests.

Birmingham, Ala. — The Strowd-Holcombe Cotton Mills have let contract for an addition that will more than double the capacity of the plant. It is expected that the building will be completed May when 14,000 spindles will be installed.

When the addition is completed, the napping equipment here will be moved to the Buck Creek Mills, Siluria, which are under the same management as the Strowd-Holcombe, and the latter mill will produce print cloths only. Robert & Co., Atlanta, are the engineers.

Salisbury, N. C. — The Southeastern Bleaching and Dye Works, recently organized here, as noted, have secured a building on E. Steeple street and Lexington road and will establish a plant for dyeing and bleaching yarns, specializing in silk and rayon. T. H. McKay and G. E. Dombart, Commercial Bank Bldg., Charlotte, are the principal owners.

Knoxville, Tenn. — The Sevierville and Newport, Tenn., plants of Charles H. Bacon Co., near Knoxville, have been temporarily closed. The Sevierville plant shut down, following a visit of J. J. Mallock, of Loudon. The company's mills at Cleveland, Greenville, Lenoir City, Loudon and Morristown, Tenn., are reported to be operating on full time. They manufacture hosiery.

Blacksburg, S. C. — The Blacksburg Spinning Mills held its annual stockholders meeting Friday, re-electing S. A. Sifford, president; C. N. Alexander, treasurer and manager; C. W. Whisenant, vice-president. These with two newly elected directors, B. A. Dobson and J. W. Brown, of Gaffney, constitute the board of directors. The directors meeting followed, electing A. N. Sifford, secretary, the latter having been acting secretary during the past year.

This mill, it is said, has had a most successful year and it is proposed to double its capacity during the current year, unless the option held by Flint & Co., is exercised by or before April 17.

Malvern, Ark. — Further details of the mill to be established here by the International Shoe Co., St. Louis, Mo., show that the mill will have

14,000 spindles and necessary looms for making cloth for shoe lining and canvas gloves. J. C. Rand is president.

The plant will cost more than \$1,000,000, will employ from 300 to 400 people, and will ship approximately four carloads of shoe lining and canvas for gloves each week. Heretofore the International has purchased cloth for lining and for gloves from other mills. Citizens of Malvern provided a 300-acre site and a bonus of \$25,000 toward cost of switch tracks. Power will be obtained from the interconnected electric system of the Arkansas Power and Light Company.

Columbus, Ga.—Reconstruction of the machine shop building of the Eagle and Phoenix Mills here, one of the oldest buildings of the plant group, has been started, the improvement to cost between \$15,000 and \$20,000, according to H. O. Davidson, vice-president. Mr. Davidson stated the rebuilding is simply for the purpose of modernizing the shop and is not in the line of expansion.

Chester, S. C.—Aragon-Baldwin Cotton Mills have awarded contract for new picker building, to be located at the Baldwin Mill, Chester, S. C., to Gallivan Construction Company.

The new building will be two stories and basement, 75x 107 feet, of brick and steel construction. It will be located between the main mill and the weave shed. First floor will be used for winding, second floor for picking, and basement for storage. Machinery will be moved from present locations to new building.

J. E. Sirrine & Co., are the engineers.

Chester, S. C.—The stockholders of the Aragon-Baldwin Cotton Mills, Inc., with textile plants at Chester, Rock Hill and Whitmire, held their annual meeting here. Officers re-elected for the ensuing year are: Alexander Long, Sr., of Rock Hill, president and treasurer; E. R. Lucas, of Chester, vice-president; David Jennings, of New York City, vice-president; A. L. Emery, of Charlotte, vice-president; E. O. Hunter, of

Chester, secretary and assistant treasurer. Work will be started shortly on the erection of a \$100,000 picker room for the Chester plant.

Lincolnton, N. C.—The Rudisill Spinning Mills have been organized at Cherryville, N. C., to take over the Roseland Spinning Mills at Lincoln-

ton. The company is capitalized at \$250,000, and is formed by M. M. and C. A. Rudisill, and W. B. Putnam. C. A. Rudisill is treasurer of Carlton Yarn Mills, and is connected also with Nuway Spinning Co., Cherryville; Morowebbs Mills, Dallas; and Rex Spinning Co., Gastonia.

It is understood that the new company will improve the Roseland plant, which has been idle for some time, and put it in operation. The mill was formerly owned by R. L. Goode and associates, of Charlotte, but has been in the hands of the bondholders for some time. It has 4,320 spindles.

Spartanburg, S. C.—Announcement of \$250,000 7 per cent serial gold bonds of the Yarns Corporation of America, who are soon to build a plant in Spartanburg, is made by A. M. Law & Co., stock and bond concern. The bonds are being sold to meet the cost of the plant and furnish additional working capital.

The bonds are dated March 1, 1928, are due serially and are in denominations of \$1,000 and \$500.

The Yarns Corporation of America was incorporated under the laws of the State of New York, January 15, 1927, and represents a merger of three competing concerns, the statement says, "the Grisman Co., Aibel Bros., Mindlin & Gross, Inc., and the Commercial Rayon Dyeing Co., Inc., (Owned by Aibel Bros.) all of which companies had been successfully engaged for some years in converting and distributing rayon yarns."

Anderson, S. C.—The first unit of machinery to be brought to the Appleton Manufacturing Company Anderson from the Lowell, Mass., plant of the Appleton Co., where operation has been suspended.

The company will transfer 30,000 spindles and approximately 800 looms to Anderson for installation in the plant here. It is expected that all of this machinery will be shipped to Anderson before the latter part of March and will be ready for installation here when the addition to the plant has been completed.

A portion of the machinery is to be installed in the South end of the present plant, a portion of the plant which has been used heretofore solely for storage space.

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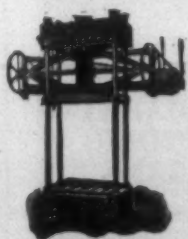
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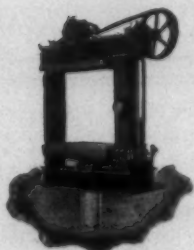
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J. R. McElwee, Manager

Weavers' Division Discusses Plain and Fancy Work

(Continued from Page 21)

I don't know why they put this off on me, for I don't claim to be a very good weaver to start with and certainly am not a fancy weaver.

Mr. Willis has two reels of moving pictures on rayon which we can show now but can not show later. I think it will be better to have them now, as they will interest everyone, and have the discussion after lunch. If there is no objection, we shall do that.

Moving pictures on the manufacture of rayon were shown, after which the meeting adjourned for lunch.

Discussion on Fancy Weaving

The fancy weavers met in the auditorium of the Y. M. C. A. at 2:10 p. m. and were called to order by Carl R. Harris, who presided in the absence of E. A. Franks.

Warps With Different Yarn Numbers.

CHAIRMAN HARRIS: The first question for discussion is: "What is the best method to make up warps that have different numbers of yarn?" The answers are as follows: "Generally speaking two beams, though there are some weaves where one beam would be preferable." "If the nature of the weave is the same in different numbers of yarn, distribute the different numbers proportionately in the slasher comb." "All owing to the kind of weave." "Two beams." "We go by the different weaves; where cord has floats we use top beams but on plain work one beam; on twenty harness dobbies with different counts I prefer two beams." "In most cases on one beam." "Put different numbers on different beams." "To have different beams for each number of yarn." Is there any discussion on that?

J. K. POOLE, Assistant Superintendent, Stonecutter Mills, Spindale, N. C.: My experience has been that if the weave is of such a nature that you can put it on one beam it is always best to put all of your yarn on one beam. Sometimes you can not do that because the nature of the weave is such that the contraction is so different, and that is sometimes the reason you use different numbers. Maybe you have a different weave there, or the end of

the weave is different, and the contraction might be different, so much so that you can not put it on one beam. If it can be made on one beam I should say always make it on one beam.

SMITH CROWE: I have a weave in the mill now that has two different yarns in it other than yarn 60, two-ply. That ply of yarn is weaving a certain stripe. I am running that all from one end, 60s two-ply and 50s regular.

MR. POOLE: Using the 60s two-ply, you can put the 60s on another beam, but you would have another beam to fool with.

CHAIRMAN HARRIS: Well, the thing I want to bring out is whether, with that nature of weave, that difference in yarn, it is customary. That is the thing we want to bring out. Are there men here who do it?

A MEMBER: With the same kind of filling, the filling will contract the same. Say you run three ends of the same number, they will not all run from the same beam satisfactorily. The filling will contract accordingly.

A MEMBER: You can handle that on the slasher.

One Beam is Best

J. F. BLACKMON, Designer, Watts Mill, Laurens, S. C.: There are a lot of things to consider. The first is that you take two yarns that will mix; you have to be a good judge of that. Another thing; you have to determine the amount of size for the different kinds of yarns. You can not size all of them the same. I believe it will give you a better weave if you put it all one beam, if you can. You have to be a good judge of it. We put all our handkerchiefs on one beam and don't size them. We run them through raw, and they take up nicely. There are a lot of things you have to take into consideration. One thing in favor of putting it all on one beam is that if you have a fabric you can make on one beam it gives a better finished result, because generally the top run of yarn is under more tension than the bottom. We have had trouble where we ran from the top end; cords broke in the finishing; so we put it all on the bottom beam.

CHAIRMAN HARRIS: I remember Mr. Crowe was telling me about that weave out there, and he mentioned it. I read you the answers we got, and it looks as though they are about evenly divided. There are three out of

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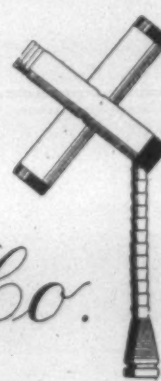
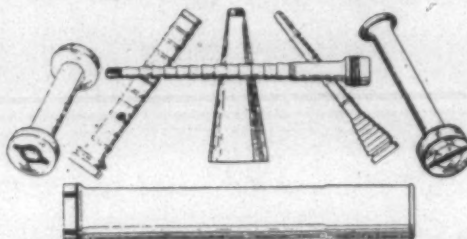
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eight that say put the different numbers on different beams; the others say according to the weave. Anything else on that?

MR. CROWE: Our 50s yarn is being run with 60s, two-ply. We assume we use one beam; we take the space of two beams for one end of 60 two-ply. That would be as near as we could possibly get and would bring us much nearer together than 50s and 30s. We have to take into consideration that 30s will not contract with the filling as the 50s will, do by making a whip roll with a 60 and 50 instead of 50 and 30, with the kind of weave I am making, it will be all right. Of course, the weave always has to be taken into consideration.

MR. POOLE: That is about what I try to practice. In other words, he cited a particular instance there. I always try to lay my heavy yarns not distributed proportionately but a little less, even to 10s and 15s. I use the coarse yarns a little less in proportion than the fine yarns, for the reason Mr. Crowe mentioned; they do not take up the filling. By reason of the warp end being larger, the warp end will not contract. Therefore if you lay it proportionately you will have a tendency of the coarse yarn to run slack.

MR. BLACKMON: I brought out a while ago that uneven tension will cause breaks in the finishing. I find that running the coarse yarns a little less than in proportion will give better results.

CHAIRMAN HARRIS: The next question is, "Why one beam?" I will read you the answers: "One beam is always the best if contraction is the same in the weave." "Less cost." "Because you get best results." "Less slashing cost, easier to put on loom and start up, better tension on yarn with few ends, more regular width." "When you have one number of yarn." Is there any discussion there?

MR. GAGWIN, Judson Mills, Greenville, S. C.: By using two beams very often the top beam will run out before the bottom beam. Of course, that could be regulated by measuring processes. We have that trouble in our plant. It necessitates two operations, which makes additional cost.

CHAIRMAN HARRIS: That is the same trouble we have with getting slasher sets to run out even.

MR. GARWIN: Yes, only more so.

Why Two Beams?

CHAIRMAN HARRIS: The next question is, "Why two beams?" Let me read the answers: "Usually the different yarns are woven differently, consequently the contraction is not the same." "When weave is such that contraction is so much different that ends in one weave get tight and break, and ends in other weave get slack and cause overshots, then two beams must be used." "Run tension on different numbers on account of size of yarn." "When the take-up is radically different it should be put on two beams, also silk where mixed with cotton." "Because different numbers of yarn do not lie well, beams with different numbers." "Better running work by getting the right tension on each beam." In other words, it resolves itself down to using one beam if possible. Those are the answers Mr. Franks got.

Covering Fabric With Two or More Beams

The next question is, "Can you cover a fabric with two or more beams?" Can you cover a fabric as well running two beams as one? How about that?

MR. BLACKMON: I say no.

MR. POOLE: I think you could if it were possible to get the same tension. That might be possible but highly improbable.

CHAIRMAN HARRIS: The answer to that question are: "Not as well as with one beam." "I think this would be very difficult if very much plain weave is shown in the goods." "Only in terry and pile weaves." "Yes; set whip roll high, filling covering fabric, with tension on both beams." "Yes; it is more difficult than one beam." "Different interlacing should be noticed, as well as different counts." "Yes."

What Are "Shiners?"

The next question is, "What are shiners in silk or rayon goods?"

MR. CROWE: Tight silk.

A MEMBER: Loose silk. (Laughter.)

MR. POOLE: I think I put down my answer as unnatural pick, either too tight or too slack. Usually more tightness causes shiners.

MR. BLACKMON: When silk is wound on the bobbin more moisture causes it to expand. If silk is treated so humidity will affect it very little, that is the ideal way to have it treated. It is hard to make a shiner with dry silk or silk that is treated properly, so moisture can not get to it.

CHAIRMAN HARRIS: The question is, what is a shiner?

MR. BLACKMON: It is uneven tension.

CHAIRMAN HARRIS: The answers we got are: "Stretched or tight picks on loom, or silk that is stretched in process." "A conspicuous thread or threads." "Kinky filling and tight picks." "Variation in tension in manufacturing." "They come from several causes; tension too tight on winders, or packing hugging cop in shuttle, hanging up on skeins on rewinder." "Generally caused by the silk absorbing moisture and expanding or stretching, also tight and loose picks." "Tight picks running horizontally across the cloth." "Stretched or bad rayon."

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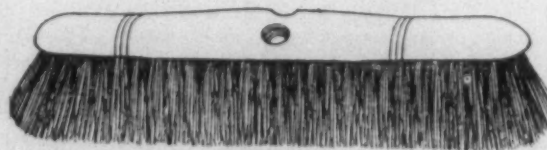
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The next question is, "How to remedy them?" Can anyone suggest a way?

Must Condition Silk

MR. BLACKMON: When there is nothing wrong except in the weaving, the first thing to consider is the condition of the silk. It is generally done by dipping in oil or spraying in oil and extracting the oil by some process.

CHAIRMAN HARRIS: How about it, Mr. Crowe?

MR. CROWE: I agree with him. The stretch needs to be eliminated in rayon as much as possible. A great many times shiners are made before they ever get to the weave room.

Many Causes for Rayon Shiners

MR. POOLE: When I get to having trouble with shiners I don't confine my inquiry altogether to the weave room. I work to get rid of them, but not in the weave room altogether, because I have often found that the trouble is in winding and in quilling it, as well as in weaving. Of course, the tension will cause shiners if it is not right. I think the shiner may be caused by any process in rayon, from the time you take it out of the case.

CHAIRMAN HARRIS: How can you get the tension properly regulated?

MR. POOLE: What I have in my fillers are weights all the way from nothing up to a pound. I usually regulate that by changing the tension weight.

Adjusting the Tension

CHAIRMAN HARRIS: It is customary in silk to use some kind of artificial tension in the shuttle, isn't it?

MR. POOLE: Yes, it is.

CHAIRMAN HARRIS: What do you think is best?

MR. POOLE: I don't know. I get pretty good results from flannel.

Question: Do you like that better than filling?

MR. POOLE: Yes, because I get better results.

MR. BLACKMON: We use a shuttle that has a woolen eyelet.

A MEMBER: I use the Neutry eye.

MR. POOLE: There is another reason why I use flannel. I change so often in the weave room; I might be running two warps of rayon filling on the same loom, then put in a warp of cotton. I use a different bobbin and use a different filling quill for rayon and cotton; but I use a combination shuttle, one shuttle on which I can run either cotton or rayon. It is a right difficult matter with that shuttle to get the proper tension on rayon. I use a shuttle with just an ordinary eye, which I use on a majority of cotton substances. Therefore I can not do much with my eye; I have to do it in the tension back in the shuttle. That is the main reason why I use flannel, because I am using this special shuttle for both rayon and cotton.

CHAIRMAN HARRIS: You have to run the tension all the way back?

MR. POOLE: Yes.

MR. GARWIN: I should see that the shuttle is boxed properly, that the shuttle is in the box all right and not too tight. Eliminate as far as possible all knots. I think that was brought out; also the proper filling of the bobbin.

CHAIRMAN HARRIS: Mr. McKenna, you have been using some rayon here in the school, haven't you?

MR. MCKENNA, Instructor in Dyeing and Weaving, Clemson College: Yes. I should like to hear something about oiling rayon.

Oiling Rayon

MR. BLACKMON: Dip it in soda; let it lie for about ten minutes.

CHAIRMAN HARRIS: What kind of oil?

MR. BLACKMON: I can not say; there are a lot of trade names. I don't remember it.

CHAIRMAN HARRIS: How?

A MEMBER: We spray it with the oil.

CHAIRMAN HARRIS: All of you use oil, some kind of oil, do you?

MR. CROWE: We have used oil but are not using it at present.

MR. POOLE: That is my fix. At times we use it and at times make up our minds it is best not to use it.

CHAIRMAN HARRIS: What kind of oil?

A MEMBER: Silk oil.

A MEMBER: Neat's foot oil.

Remedies for Shiners

CHAIRMAN HARRIS: Perhaps you would like to hear the answers that were received to the question as to how to remedy shiners, so I will read them. "Eliminate all stretch in every process of handling during manufacture, preparatory process, and on loom." "Uniform tension on ends in all processes through which yarn passes, as well as at loom." "Have tension right in shuttle, harness timed right, not too much power on loom." "Start from the first time you touch it until the last time always to keep in mind not to rough or stretch it." "Just have everybody trained to watch about defects and stop shiners; we are bothered very little." "Condition silk; even tension in shuttle." "Broken filaments in silk or rayon, irregular tension in shuttles are to be noticed." "Less tension in shuttle." Is there any argument or any discussion on those answers?

Question: What type of bobbin?

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MR. POOLE: I use a cone bobbin, shellaced.

MR. BLACKMON: I use cone bobbins, enameled.

R. M. HUGHES, Overseer Weaving, Judson Mill, Greenville, S. C.: We use the shellacked bobbin.

CHAIRMAN HARRIS: Are any different types from those being used? Mr. Crowe?

MR. CROWE: I use the cone bobbin, shellaced.

MR. POOLE: Is anybody using a bobbin where the rings are larger near the small end of the bobbin?

CHAIRMAN HARRIS: Is anybody using that? (No response.)

MR. POOLE: My reason for asking is that I have noticed several articles about rayon showing it quilled on a bobbin of that type, and I wondered if anybody has tried it.

MR. BLACKMON: We tried it on some samples, ran a very-fine grade of rayon.

MR. POOLE: Has anyone had trouble with rayon sloughing off?

MR. CROWE: We have, to some degree.

CHAIRMAN HARRIS: What did you do?

MR. CROWE: I don't know what all we did do.

MR. BLACKMON: That depends on the tension of your silk. Take silk unconditioned and put it under heavy humidity and it will slough off.

Question: Will not Mr. Stribling tell us something about quilling the bobbin?

CHAIRMAN HARRIS: We shall be glad to hear from you, Mr. Stribling.

Quilling the Bobbin

J. W. STRIBLING, Universal Winding Company, Atlanta, Ga.: I am a representative of the Universal Winding Company, and I don't know whether I should have anything to say here. ("Go ahead.") For this gentleman's information, however, that five-wind, as we call it, will help out a whole lot over the seven. The five-wind binds the silk better over the quill. To do that you cut production in the machine, because five-wind will not run as fast as seven-wind.

MR. WEEDON: Even the manufacturer himself has trouble with keeping rayon on the cone unless it is immediately conditioned, and I should not be surprised if that is the trouble. If it is not conditioned immediately it will unwind. It is rather stiff and springy.

MR. POOLE: I should like to ask how many looms you usually have on rayon.

MR. CROWE: Solid rayon, not any at present. We have had as high as 75.

G. V. HANNA, Overseer Weaving, Watts Mills, Laurens, S. C.: I have 200.

Question: How many are running rayon in automatic looms?

MR. HANNA: Six.

MR. POOLE: I am running 350 but have the magazine cut off.

MR. HUGHES: I have the magazine on six.

MR. POOLE: Anything that comes in contact with rayon has a tendency to change it, to break the filaments.

CHAIRMAN HARRIS: Let's go on to the next question. "What are the causes of streaks in warp of rayon fabrics?" What are the causes?

Streaks in Warp of Rayon Fabrics

MR. CROWE: Mr. Poole ought to be in better position to answer that than anybody else, as he has run more solid rayon warps than any of the rest of us.

MR. POOLE: I think I gave that in my answer to the question as to what causes shiners; it is an unnaturally conspicuous end or pick. When I got down to that question I didn't know whether it had reference to colored rayon or what.

CHAIRMAN HARRIS: What has been the experience of some others?

MR. HUGHES: Slack ends, where you have to piece up. Where you have a tight end, that will make a streak. The slightest bend in the reed will make a streak.

CHAIRMAN HARRIS: The answers listed here are: "This is probably caused by making up warp out of two different batches of rayon of the same grade and brand but made at different times." "If rayon is natural color, this could be caused by uneven denier or abuse of rayon in processing it. If colored rayon, uneven dyeing." "Not knowing how to handle it, same weight on each thread. Avoid rough or slack ends." "Streaks are mostly in warp, or uneven dyeing. Uniform dyeing helps streaks in warp, but a tight thread is a streak." "Reed may cause this; silk improperly sized."

MR. CROWE: The question is whether that fabric is to be finished or dyed some color. It may not be so noticeable in the gray but will be very noticeable when it is finished and dyed.

Remedies for Streaks

CHAIRMAN HARRIS: The next question is, "How to remedy streaks?" Is there any discussion on that?

MR. POOLE: The only way to do it, as far as I can see, is to have if possible the same condition where the rayon is stored, the same relative condition

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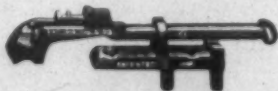
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and everything; that might be a help. Store your rayon. Then if you do get two ends out it might be less likely to get streaks, if that is the cause. The cause, as I understand it, is that the rayon is conditioned under different conditions. One batch might be overheated. It might not be possible to tell it until the piece of goods is finished; then it bobs up.

CHAIRMAN HARRIS: There are five answers here: "By using all of one batch before beginning on the other." "Size rayon for denier, examine processing machines, and examine dyeing process and methods." "Same as in filling, proper handling, same tension, also select yarn for each warp." "Watching for the above defects and training all help to be careful in handling rayon at all stages." "A reed not so deep, silk with elasticity retained in slashing, and also not too stiff and harsh."

Harness on Dobby Weaves

The next question is, "Is it practicable to condense number of harness on dobbie weaves?"

MR. POOLE: As I understand the question, it all depends on the figures, on whatever you are going to make. That largely depends on the weave.

MR. CROWE: On some weaves it is and on some it is not. It can be answered yes and no. There are some dobbie weaves that could be made possibly on 8 harness where it would be a decided advantage to make it on 12 or 14, and you make a straight draw out of it. Isn't that correct, Mr. Blackmon?

MR. BLACKMON: Usually so. Sometimes the less harness you have, the less liable you are to have these bad places.

MR. HANNA: I think the less harness you can use, the better, from this standpoint—because you keep the tension tighter for the shuttle. The more harness you have, the farther your harness eye is from the shuttle, it makes that end inclined to slack. The closer you can get them, the fewer dropped threads, skips, and things like that you will have, on heavy, plain, or fancy.

CHAIRMAN HARRIS: There are six answers to that question, as follows: "Yes and no." "Yes." "It is." "In some cases." "No." "Yes."

Is there any more discussion? If not, let's go on to the next question, which is "Why?" I think that has been covered, and I will read you the answers. There are four. "There are some weaves that it is desirable to condense harness as much as possible, where sley is very thin, and the number of heddles on harness is not excessive." "It is on heavy weave." "To take load off head, reduce space for drawing threads, can watch floats and skips." "If harness run high it may be better."

The next question is, "Why not?" Why is it not practicable? The answers are: "Other weaves that have staggered or irregular draws can be made more simple by adding harness and making the draw straight; also where the sley is very heavy it is better to add more harness, so there will be less heddles per harness, even thought it be a plain weave." "Should not condense on light construction." "Some occasions sheet of yarn is so heavy it is better to be distributed on more harness and save high breakage." "Broken draw may make it very difficult for the weaver, also in drawing in." "Because the drawing in will be more complicated for the weaver, and you will have more misdraws in your cloth."

That covers the list of questions. I shall be glad to have any questions that any of you care to ask and discuss those for, say, fifteen minutes. Are there any questions?

MR. HANNA: I have chambray running on automatic loom and have a lot of trouble in jerking ends on magazine ends. When it changes filling it jerks the loose and back in and puts in a double pick. I have not been able to stop it. Can anyone tell me how?

MR. POOLE: I have that trouble, too.

Question: How long have you been running that way?

MR. HANNA: We put the fabric on just two or three weeks ago. This particular style is colored filling, and it shows up so much plainer. On white one would not notice it. 40s filling.

Question: Do you condition the filling?

MR. HANNA: No.

A MEMBER: If you condition the filling it might help it.

MR. HANNA: I have two shuttles. The thread is jerked in on the chain when it changes bobbins in the magazine.

CHAIRMAN HARRIS: We have that trouble on cotton, lots of times it fails to hold and jerks loose from the battery. A lot of times it will not cut at all and will not hold. We have trouble that way.

MR. POOLE: I had that trouble once and found I was getting double picks on a rather heavily constructed fabric. I found the filling was breaking and the loom was turning over without a pick in it, when I really thought it was jerking in.

MR. HUGHES: We stopped a good deal of it by different things we do. We took a wire and placed around the temple screw and made it shorter and easier to pull out.

CHAIRMAN HARRIS: If there is nothing else to come up, the meeting will now adjourn.

(For list of those present at the meeting see Page 33.)

Certificates for Textile Students

Chattanooga, Tenn.—Desirability of establishing a system of uniform textile certificates for persons who have taken certain units of instruction in night schools was stressed by speakers at the convention of executive officers, State directors, State supervisors of industrial education in session here. T. H. Quigley, of Georgia School of Technology, was named chairman of a committee to make a report on the question.

Possibility of vocational programs for public service corporations was the principal topic before the convention at which Frank Cushman, chief of industrial education service for the Federal Vocational Board, and President H. A. Morgan, of the University of Tennessee, made addresses.

Dixie's Textile Supremacy

The South leads America in cotton manufactures, having some three hundred and five thousand more spindles than all the other States combined and operating sixty-five per cent of the country's total of spindle hours. These epoch-marking figures in the 1928 edition of the Southern Railway System's Textile Directory, a collection of facts from authoritative sources, reveal Dixie as at last supreme in a realm of industry where, a generation ago, she held only a beginner's stake. It is doubtful that the world's economic annals affords a higher instance of such progress at once speedy and sure.

In 1880 the South had scarcely more than five per cent of the cotton spindles in the United States. From then till now, when she has fifty and forty-two hundredths per cent of them all, her textile growth has been so well sustained that it seems, when looked back upon, almost uniform from season to season. "Since 1911 Southern mills each year have led those of all the other States in consumption of cotton. In 1926 the South passed New England in the number of spindles installed, and in 1927 definitely took the lead over all other parts of the United States, including New England, in cotton manufacturing capacity." In that year, moreover, there was a net gain of five hundred and two thousand, two hundred and ten spindles in the South, and a net loss of one million, three hundred and seventy-two thousand four hundred and forty-four spindles in the other States. In the same period Southern mill's consumed five million, four hundred and four thousand, seven hundred and fourteen bales of cotton, or seventy-two and ninety-seven hundredths per cent of the nation's total; and "with 50.42 per cent of the spindles in place, worked 65 per cent of the aggregate spindle hours of the year."

It is significant, too, that woolen and worsted mills are in evidence, that silk manufacturing grows, and that during the last twelvemonth important rayon plants were established. Southward the textile empire takes its way. In publishing a directory, with maps and statistical

tables, of these vast developments, the Southern Railway System renders a valuable service. Better still is its daily endeavor to draw industries to this region and to encourage their growth.

Of Georgia it is cheering to note from the figures given that her increase in textiles during the last few years has been especially marked and that the Southward trend bids fair to find its crest and climax within the wondrous resources of her Piedmont zone.—Atlanta Journal.

A Cottonless Southeast?

The Southeast as a "land of cotton" is destined to live only in snog and tradition, if so able a chemist as Dr. William J. Hale is right. The cost of growing it in this region, he predicts, will make its displacement here by other crops a matter of economic necessity. As director of organic chemical research for the famous Dow laboratories of Midland, Michigan, Dr. Hale commands a wide hearing. His forecast concerning cotton was made in an address, at Charleston, to the annual meeting of leaders in the naval stores industries.

"Cotton still will hold its own west of the Mississippi," he said, in substance; "and in the Southeast its cultivation can be continued at a profit for some years to come on the larger plantations, but the small farmer will do well to look about for other crops at once." He expects the rivalry which the old staple already faces in "alpha cellulose from woody fibres" to become keener and keener, and at length irresistible. "The high-priced product cannot compete with the low-priced cellulose now being manufactured from wood and soon to be made from cornstalks."

Fortunately, the resources of this region are such that it could dispense, in time, with what has been its major money crop and still continue prosperous. Indeed, there are thoughtful observers who believe that it would be better for the Southeast today if cotton were reduced to a minor place in its agriculture. Certainly Georgia has been better off since the boll weevil invasion forced restriction of the cotton acreage and gave urgent incentive to production of foodstuffs. Communities on the brink of bankruptcy a decade ago are now thriving, as a consequence of dairy farms having taken the place of cotton fields.

Changes as far-reaching as that which Dr. Hale has in mind do not come precipitately, as a rule, but develop gradually over periods rather long, sometimes so gradually as never to disturb the existing economic order. In an age of speeding science, however, it is conceivable that such processes may move rapidly. The reassuring fact is that in a State like Georgia the change, whether swift or slow, would leave the bases of prosperity unimpaired.—Atlanta Journal.

The Viscose Company is to build another unit at Lewiston, Maine during this year.

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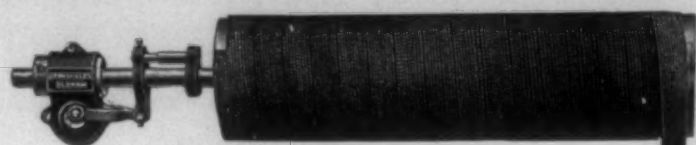
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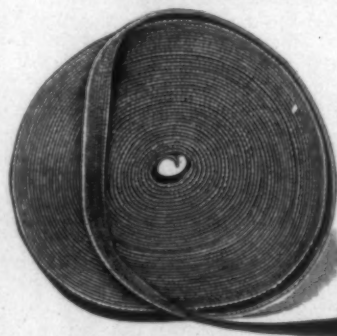
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**Domestic Mill Consumption
of American Cotton By
Grades and Staples**

(Continued from Page 12)

FOUR—Domestic Mill Consumption

The consumption data herein reported indicate that the average of the grades and staples consumed by American mills is higher than the average of the crop of Georgia. It is planned to make estimates of the grades and staple produced throughout the cotton belt another year and to extend the utilization study to a greater number of mills. Were

In general, it is found that the cotton used by print cloth establishments ranges from 15-16 of an inch to 1 3-32 inches in staple and from low middling to good middling in grade.

This increase in per capita consumption of cotton cloth is significant for two reasons: (1) Cotton cloth represents more than three-fourths of all lint cotton consumed, and (2) the increase has occurred in spite of the obvious decrease in the quantity of cotton that goes into women's clothing.

The increasing quantities of cotton cloth going into automobiles,

Table 10.—Per capita consumption of cotton cloth in the United States, census years 1899-1925.

Year	Avg. Yearly Consumption Million Sq. Yds.	Population Million	Per Capita Consumption Sq. Yds.
1899 and 1904	4,539	79	57
1909, 1914 and 1919	6,064	98	62
1921, 1923 and 1925	7,202	112	64

such data available for the past several years, the trend of consumption by qualities, as well as that of production, would be indicated. In the absence of such data, it is impossible to draw definite conclusions as to the relation between the national consumption of any particular grade or staple length and its production.

These data do not prove conclusively that the long-time trend of the demand for various grades and staples of lint cotton is upward, because no accurate records of cotton content of the different counts of yarn are available. Nevertheless they do indicate an increase in demand for better cotton.

According to customary methods of yarn manufacture, the warp counts above 20 and the filling counts above 30 are usually made from cotton 1 inch and longer in length. Other things being equal, the higher the grade of the cotton and the longer, stronger, and more uniform the staple, the higher the count and the strength of the yarns that can be manufactured from it.

Unfilled orders for cotton goods anticipate by one to two months the trend of raw cotton consumption. A part of the lag between unfilled orders for cloth and cotton consumed in its manufacture is accounted for by the time that is required to process cotton at the mill. In New England, on a single 48-hour shift basis, it requires at least six weeks to process print cloth. On finer goods, the time required may run as high as four or five months.

The unfilled orders for cotton textiles, published by the United States Department of Commerce from the reports of the Association of Cotton Merchants of New York and the Cotton Textile Institute, Inc., may be used by the grower, the merchant, and the manufacturer as an indication of immediate demand.

For example, in print cloths, the unfilled orders increased from 124 million yards at the end of January, 1927, to 161 million yards at the end of June. During this time the average monthly production was 70.7 million yards. These figures indicated that for the next few months there would be an increased consumption of cotton by print cloth mills.

rubber goods, wall coverings, awnings, road markers, harness, substitutes for leather, and a great variety of other relatively new articles, has more than offset the effects of changing styles of clothing and of the increased competition from jute, rayon, silk and other textile materials.

The utilization of cotton in these several directions has come about without organized effort on the part of manufacturers and growers to develop new uses for their products. There is reason to believe that by means of a thorough-going analysis of the markets for cotton goods, we may find ways and means of increasing the per capita consumption of cotton at home, if not abroad.

**Cheaper Cloth Promised
Italians By Mussolini**

Rome, Italy.—Cheaper cloth will soon be available in all of Italy at Premier Mussolini's instigation. Eight categories of cloth, six of which are all wool, and two a combination of wool and cotton, will be put on the market at retail prices ranging, roughly, from \$2.10 to 70 cents a meter. (A little more than a yard.)

These prices, a government communication says, are lower than any pre-war prices, taking into consideration the lira's present valuation.

**India Cotton Placed
At 4,586,000 Bales**

Washington, D. C.—Cotton production for all India for the 1927-1928 season is estimated at \$4,586,000 bales of 478 pounds net, according to a cable received by the Bureau of Agricultural Economics from the Indian Department of Statistics at Calcutta. This estimate, which is the second and final, indicates an increase of 10.2 per cent over last season's crop of 4,162,000 bales, and a decrease of only .6 per cent from the average production for the last five years.

Acreage planted to cotton this season is estimated at 23,812,000 acres.

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Attendance at Weavers' Meeting

Among those who attended the meeting of the Weavers' Division of the Southern Textile Association, held last week at Clemson College, S. C., were the following:

Able, J. W., Overseer Cloth Room, Abbeville Cotton Mill, Abbeville, S. C.
 Alexander, Joseph A., Loomfixer, Courtenay Mfg. Co., Newry, S. C.
 Allen, M. G., Overseer Weaving, Alexander Mfg. Co., Forest City, N. C.
 Asbelle, J. A., Asst Supt., The Langley Mills, Langley, S. C.
 Barber, H. S., Student, Clemson College, Clemson College, S. C.
 Barton, T. R., Night Weaver, Orr Mills, Anderson, S. C.
 Batson, Louis P., Sou. Rep., Shambow Shuttle Co., Greenville, S. C.
 Becknell, W. W., Supt., Arkwright Mills, Spartanburg, S. C.
 Bell, J. L., Student, Clemson College, Clemson College, S. C.
 Bennett, D. L., Overseer, Drayton Mills, Spartanburg, S. C.
 Bevill, S. H., Overseer Weaving, Orr Cotton Mill, Anderson, S. C.
 Bishop, C. W., Overseer Weaving, Saxon Mill, Spartanburg, S. C.
 Bishop, O. E., Overseer Weaving, Clifton Mfg. Co., Converse, S. C.
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 Cantrell, E. L., Overseer Weaving, Alexander Mfg. Co., Forest City, N. C.
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 Vincent, W. D., Student, Clemson College, Clemson College, S. C.
 Wells, G. G., Jr., Student, Clemson College, Clemson College, S. C.
 White, W. H., Overseer Weaving, Kenneth Mills, Walhalla, S. C.
 Whitley, C. W., Overseer Weaving, Osage Mfg. Co., Bessemer City, N. C.
 Whitworth, W. A., Hartwell Mills No. 2, Toccoa, Ga.
 Wigington, John T., Cotton Testing, Textile Dept., Clemson College, S. C.
 Wikle, M. M., Asst. Supt., Anderson Cotton Mills, Anderson, S. C.
 Williams, A. B., Overseer Cloth Room, Hartwell Mill No. 1, Hartwell, Ga.
 Williams, H. T., Student, Clemson College, S. C.
 Williams, Jim, Salesman, Spartanburg Mill Supply Co., Spartanburg, S. C.
 Williams, W. B., Overseer Weaving, American Spinning Co., Greenville, S. C.
 Willis, H. H., Director Textile Dept., Clemson College, S. C.
 Wofford, L. E., Night Supt., Inman Mills, Inman, S. C.
 Wynne, I. E., Rep., Universal Winding Co., Charlotte, N. C.

Merchandising Cotton Cloth

An event of much significance to the cotton textile industry was the "style show" held in New York in January by the Pacific Mills, at which a wide variety of new cloth designs manufactured by these mills were exhibited in attractive style.

The event is regarded by writers for dry goods magazines as one that "will live long in market annals, setting as it does a precedent for the cotton textile industry."

The "show" was a striking success in its development of interest among buyers in the product of the Pacific Mills. Of even greater importance, however, from the standpoint of the industry, is that it marks the definite and purposeful entry of a large cotton manufacturing concern into direct merchandising activities.

The textile industry, as a general thing, has suffered because of the fact that it has devoted its energies almost exclusively heretofore to manufacturing, leaving to commission merchants the business of disposing of the product. It is beginning to learn, however, as the Pacific

Mills show seems to indicate, that to achieve its greatest measure of success it must merchandise as well as manufacture; that it must devote its energies in a very definite way to the salesmanship end of commerce.

Many of the country's most successful industries are highly efficient selling organizations as well as factories. They are constantly in touch, first-hand, with the needs and desires of the public; they are alert to study demand, to meet it in their manufacturing processes, and to put positive selling effort behind their own products on a well organized basis.

The time has been when cotton cloth of the ordinary kinds was simply cotton cloth, a kind of standard product like sugar, that appeared to provide little opportunity for such distinctiveness in identity as to be a basis for aggressive selling. While that is perhaps still true with regard to some staple fabrics, style and individual design in cloth are assuming today a far more important place in textile activities than heretofore. Styles and designs can be "sold." They provide basis for the same sort of distinctive selling effort as the various makes and models of automobiles, radios, and other such commodities.

The textile industry is entering upon a new era in producing not only simply "cloth" but cloth with distinctive selling characteristics, and developing along with that line of production a genuine merchandising effort. The way that now seems opening promises not only a greater and more satisfactory prosperity for the industry itself, but also a much wider use of cotton cloth than heretofore, and hence an increase in the consumption of the South's chief farm product.—Greenville News.

LaGrange Team Wins Tournament

Greenville, S. C.—The Southwest LaGrange Y. M. C. A. basket ball team representing the Callaway Mills of LaGrange, Ga., won the class A championship in the Southern Textile tourney held February 16-18, in Greenville, S. C. By defeating Pelzer, S. C., 63-30; Judson, of Greenville, S. C., 33-30, and New Holland, of Gainesville, Ga., 48-10, the LaGrange team not only won the class championship, but placed three men on the all-Southern textile team. They are: Clarence Higgenbotham, captain and forward; Irving Spence, center, and Glenn Simpson, guard. The other two members of the all-Southern five are: Kay, of Judson, forward, and Leverette, of Lanette, Ala., guard.

Higgenbotham was high point man of the entire tournament in which fifty-four teams were entered.

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Cotton Goods

New York.—The cotton goods markets were somewhat more active during the week. Trade was considerably better than that of the previous week and prices were firmer and steadier. The higher cotton markets had a favorable effect, reports indicated that a very good volume of business was done in many lines. Business was good in wash fabrics, prints and other lines for summer trade. Printers were reported as being unusually busy. Print cloths and sheetings were firmer and sales were made for delivery running five and six weeks ahead. Tire fabrics sold well and are said to be in better position than any other single line of cotton goods.

The demand for duck was better and price have been advanced. There was little business in osnaburgs. Fine goods for future delivery were better and premiums were paid for spot goods. An additional amount of business on cotton and rayon mixtures was reported. The best business in the market was on printed percales, printed rayons, printed dimities, chambrays, cotton duck, print cloths and tire fabrics.

In the print cloth section there was fair business on 80 squares which sold for spot and March delivery at 10½¢, with bids of 10½¢ rejected when the staple was hardly more than firm. A good quantity of 68x72s was taken at 8½¢, most continuing them at 8½¢. Not much was done on 60x48s, on which 6½¢ was bid and 6 9-16¢ was the best possible. During the last day or two a good many 72x76s sold, on which 9½¢ is the market. A fair amount of 27-inch 64x60s brought 5½¢ and 64x60s 7 11-16¢, with 7½¢ refused on sizabel quantities for later delivery.

It was reported that 40 squares, 6.15 yard sheetings sold in a fair way at 5½¢ net. For the 44x40 count, 5½¢ to seven-eighths net, was the range quoted; 6½¢ net for the 5.50 yard, and 6½¢ net paid for the 31-inch, 5.00 yard; 7½¢ net for 36-inch, 5.00 yard. There was further business in 37-inch, 48 squares, 4.00 yard at 7½¢ net; 40-inch, 2.85 yard at 11 to 10½¢ net. For 40-inch, 5.00 yard, 7½¢ net was paid, with 7½¢ net being the general quotation at the close; 40-inch, 4.25 yard sold at 7½¢ net; 40-inch, 3.75 yard at 8½¢ net; 36-inch, 2.85 yard reported to have sold in a fair way at 10½¢ net.

Carded broadcloths were quick to reflect the cotton rise. Particular strength was being shown by the 100x60s, which were sold at 11 cents. One center which had spots and quick goods to offer, told of having moved a substantial yardage at that price. At the close, 11½ cents was being asked for two or three of the best makes. For nearby, seven-eighths was considered possible in one or two centers, while there continued to be reports of three-quarters for late contracts of another quality.

March delivery of 90x60 sold at 10½ cents; at the close, further goods at three-eighths did not seem

readily available and some centers were asking one-half. Most of the centers that had been quoting 9½ cents on the feeler-motion 80x60s were holding for three-eighths at the close. Some non-feeler goods continued to be reported at one-eighth; others quoted at one-quarter. There were sales of 112x60 carded at 12 cents.

Sales of 40-inch, 72x68, 9.50 combed lawns at 11 cents, contract; spots of 40-inch, 76x72, 9.00 yard sold at 11½ and 11½ cents. Spots of 30-inch, 88x80, 11.35 yard sold at 9½ cents and spots of 40-inch, 88x80, 8.50 yard sold at 12½ cents; spots of 40-inch, 96x100, 7.00 yard sold at 16½ cents.

Quick delivery of 35-inch, 96x104, 22-26 two-end Cantons sold at 27 cents. Spots of 44-pick rayon alpaca were sold at 14½ cents; 48-pick at 15½ cents and 52-pick at 16½ cents, all foreign rayon qualities.

The staple cotton piece goods situation is reported to be in a normal state. Every day brings a flow of small commitments, few large enough to attract particular attention. This is true of denims, chambray, khakis and other standard cloths like tickings, express stripes, flannels and heavier cottons. The mills are in the position to handle this kind of business and, although not finding it especially attractive, they are content to run along with buyers.

The Fall River print cloth market continued slow and uninteresting with scattered trading the rule. With the holiday, the volume of sales is lower than the previous week and is estimated at 35,000 pieces. The variety of goods traded in was quite wide, including twills, sateens, marquisettes and small amounts of wide and narrow print cloths.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x64s..	5½
Print cloths, 28-in., 64x60s..	5½
Print cloths, 27-in., 64x60s..	5½
Gray g'ds, 38½-in., 64x64s..	8½
Gray goods, 39-in., 80x80s..	10½
Gray goods, 39-in., 68x72s..	8½
Dress gingham	16½a18½
Brown sheetings, 4-yd., 56x60s	10
Brown sheetings, stand.	12½
Tickings, 8-oz.	22½a24
Denims	18
Staple gingham, 27-in.	10½
Kid finished cambrics	8½a 9½
Standard prints	8½

Mills May Form Selling Agency in Greenville

It is understood that several of the mills in Greenville, S. C., are planning to organize a selling agency that would handle the output of a large number of plants in this territory.

No details of the plan have yet been announced. It is said that if the company is formed, that it will arrange to operate a bleaching and finishing plant.

The Yarn Market

Philadelphia, Pa.—The yarn market was stronger during the week. With the higher cotton market, yarn prices were firmer and inquiry was better and the volume of buying was larger, although most sales covered small lots only. Buying of combed yarns was better than it has been for several weeks past, but total sales were still small.

Buyers appeared more interested and seemed to have more confidence in the new higher cotton prices. Many yarn men here expect to see yarns work to a higher basis. Inquiry for fair sized orders for delivery in March and April was reported on Friday and Saturday, but most of the offers were at prices that were 1 to 2 cents lower than spinners generally were quoting. There was more interest in carded weaving yarns and weaving numbers were neglected. Upholstery and plush manufacturers were more interested, but failed to place any large business.

The general view in the market is that while improvement last week was very gradual, it was definite enough to give strong hope that the situation is really to show marked improvement within a short time. The yarn stock situation is said to be very healthy. Spinners continue to curtail their output and it is understood that many of them are expecting to further reduce production unless business becomes much better soon. The most encouraging feature is that the number of buyers involved is increasing. This indicates that a larger number of consumers are fast getting to a point where their stocks are reaching the vanishing point. This is perhaps the most favorable feature in the whole situation. Accumulations in buyers' hands as well as accumulations in mill warehouses are conspicuous by their absence. Certain exceptions may be taken by the statistical.

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14s	33 1/2
16s	34
20s	36
24s	38
26s	39
30s	42
40s	50
Southern Single Skeins.	
6s	31
8s	31
10s	31 1/2
12s	32
14s	33
16s	34
20s	35 1/2
22s	36
24s	38
26s	40
30s	41 1/2
Southern Frame Cones.	
8s	31
10s	31 1/2
12s	32
14s	32 1/2
16s	33
20s	34 1/2
24s	36
26s	36
28s	37
30s	37 1/2
32s	39 1/2
40s	52 1/2
Southern Combed Peeler Skeins, etc.—Two-ply	
16s	48
20s	50
24s	58
26s	63
30s	69
32s	74
34s	82
36s	95
40s	1.05
Southern Combed Peeler Cones.	
10s	41
12s	42
14s	43
16s	44
20s	45
22s	46
24s	49
26s	51
28s	53
32s	55
34s	56
36s	59
38s	61
40s	62
50s	73
60s	82
70s	95
Eastern Carded Peeler Thread-twist Skeins—Two-ply.	
20s	47
22s	48
24s	49
30s	53
36s	59
40s	69
45s	80
50s	82

Southern Two-ply Chain Warps	
8s	31
10s	31 1/2
12s	32 1/2
14s	34
16s	36
20s	39
24s	40
26s	41 1/2
30s	50
40s	54
50s	64
Southern Two-ply Skeins.	
8s	31
10s	31 1/2
12s	32
14s	33
16s	34
20s	36
24s	39
26s	41 1/2
30s	48
32s	50
34s	54
36s	63
40s	73
50s	82
60s	95
70s	1.05

Invents New Picker Stick Check.

Greenville, S. C. — A picker-stick check is the invention of William T. Whitaker of this city. Two-thirds interest in the patent has been assigned to Fred M. Burnett, while Burnett shares equally in another third with Thomas A. Baugh, all of Greenville.

Officially the patent is described as comprising a hanger, a pair of flat slotted plates secured to the hanger at an angle of 90 degrees to the picker-stick when at the ends of its strokes, the plates being angularly adjustable relative to each other. The picker stick is enclosed by a flexible checkstrap.

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WANT position as overseer carding and spinning. Age 23. I. C. S. graduate. No bad habits. No. 5389.

WANT position as superintendent or as overseer, carding or spinning or both. Good record of large production at low cost. Best references. No. 5390.

WANT position as superintendent yarn or weave mill. 20 years mill experience—two years as superintendent. References. No. 5391.

WANT position as overseer weaving. Age 40; 24 years experience. I. C. S. graduate on warp preparation and plain weaving. Married, sober, reliable. Good references. No. 5392.

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WANTED—Position as overseer weaving, or as salesman for mills supplies and sizing compounds. References. No. 5394.

WANTED—Position as master mechanic; experienced in steam and electric drive. Best references. No. 5395.

WANTED—Position as overseer carding or spinning, or both. Now employed as overseer both departments. No. 5396.

WANTED—Position as master mechanic. 16 years in shop, 10 as master mechanic. Like to fix up run down jobs. Age 36. Can give all employers as references. No. 5397.

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WANTED—Position as master mechanic and engineer. 20 years experience on steam and electric drive. No job too large. Will go anywhere in the South. No. 5402.

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WANTED—Position as dyer and bleacher. Experienced on hosiery, wool, cotton, silk and artificial silk raw stock and piece goods. Familiar with laboratory work, all colors dyes, and the different methods of bleaching. Also wool scouring. Graduate University for Dyers and Chemists of Germany. No. 5404.

WANTED—Position as overseer carding. Prefer Georgia or Tennessee. Familiar with white and colored, coarse and fine numbers. Age 36 and married. No. 5405.

WANTED—Position as superintendent, or as overseer carding or spinning, or both. Especially strong on carding. Six years as superintendent, five years at one mill. The very best of references. No. 5406.

WANTED—Position as overseer carding. Have 16 years experience on coarse and fine work. Age 32. Reference, my present employers. Will go anywhere in the Southern States. No. 5407.

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WANT position as superintendent or overseer weaving. Good fancy weaver. 12 years experience in the various departments. No. 5411.

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WANT position as carder or spinner, or both in smaller mill. Experienced and efficient. No. 5414.

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WANT position as overseer carding. Experienced, honest, reliable and competent. No. 5416.

WANT position as carder or spinner, or both. Good references. No. 5417.

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WANT position as overseer carding in small room, or second hand in large room. Long experience and good references. No. 5419.

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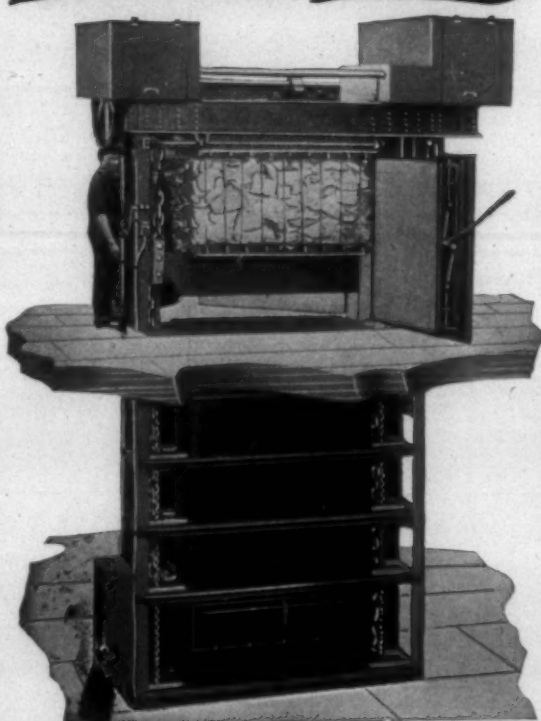
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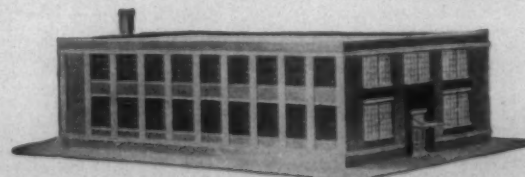
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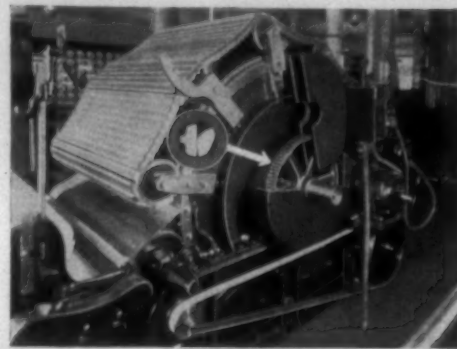
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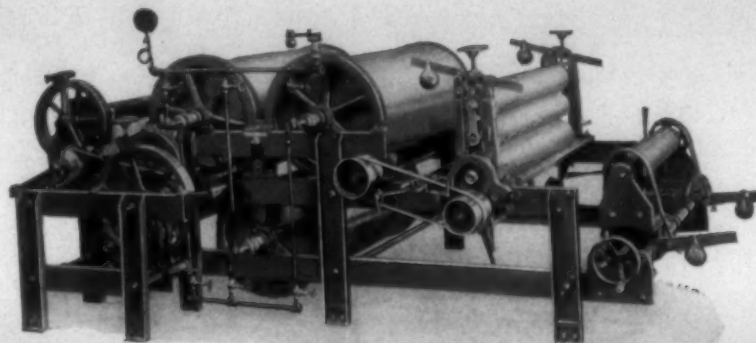
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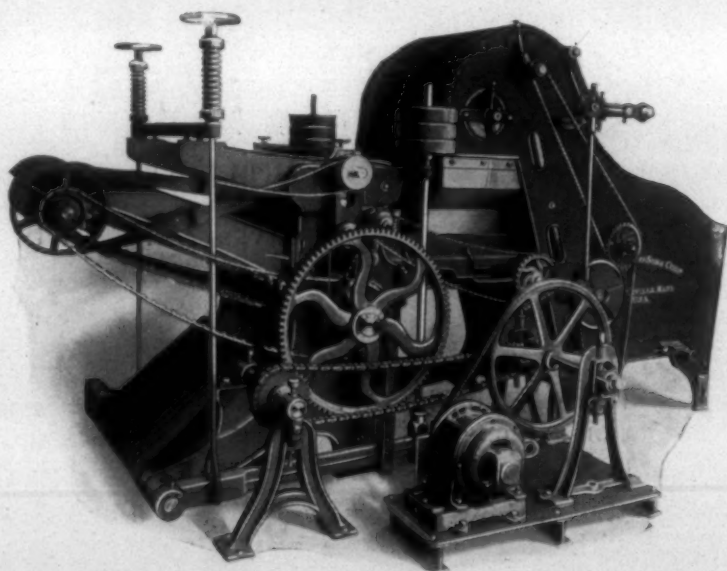
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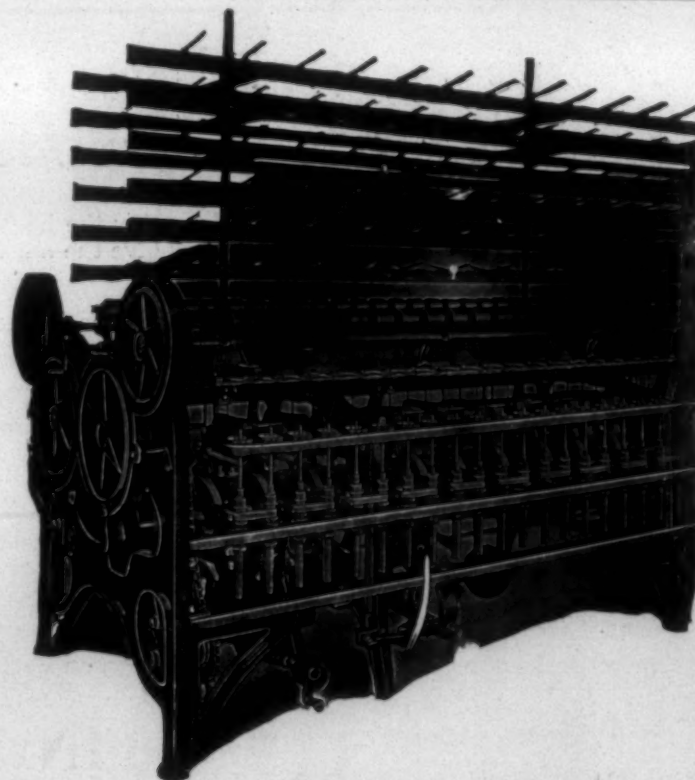
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